Supreme Court of the United States

OCTOBER TERM, 1950.

No. 565.

RADIO CORPORATION OF AMERICA, NATIONAL BROADCASTING COMPANY, INC., RCA VICTOR DISTRIBUTING CORPORATION, *et al.*,

Appellants,

against

UNITED STATES OF AMERICA, FEDERAL COMMUNICATIONS COMMISSION, and COLUMBIA BROADCASTING SYSTEM, INC.,

Appellees.

APPEAL FROM THE DISTRICT COURT OF THE UNITED STATES FOR THE NORTHERN DISTRICT OF ILLINOIS, EASTERN DIVISION.

REPLY BRIEF FOR APPELLANTS

RADIO CORPORATION OF AMERICA
NATIONAL BROADCASTING COMPANY, INC.
RCA VICTOR DISTRIBUTING CORPORATION

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March 26, 1951.

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Introduction.

The only difference between appellees' position below and their position here lies in their repudiation of the necessity for substantial evidence.

Administrative "expertise" is the current defense of a decision that flies in the face of common sense, the evidence in the record, and the inner inconsistencies of the Commission's decision itself.

The Commission cannot, by the mere act of arriving at an administrative finding or conclusion, establish that com-

patibility is not of the first importance to television, including color television. Nor can the Commission change the facts of life by administrative findings and conclusions and establish that high definition is not important to picture quality or that the public does not want large size pictures.

The whole tenor of appellees' brief is based upon the assumption that administrative findings can *make* facts, and put realities beyond the reach of judicial review.

POINT I.

Reply to Argument that the Commission Acted in the Public Interest in Adopting an Incompatible System.

It is noteworthy that in their long brief appellees nowhere refer to the 45,000,000 people who would not be able to receive a program broadcast in accordance with the standards adopted by the order.

This is the significance of incompatibility under the new standards. This is the measure of the loss of service to the listening public that incompatibility involves—a service that can be restored only by expensive and troublesome "adaptation" of the 12,000,000 sets now in the hands of the public (R. 147-48, 575, 602, 794, 876; Tr. 2197,* 4829, 4949, 5105-06, 9413-14, 9554, 10022-23).

The inescapable importance of incompatibility bears directly upon the guiding statutory standard for the Commission as set forth in the Communications Act—the "public interest, convenience or necessity". This Court has said that under these words

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* Reference is made in this manner to the transcript of testimony before the Commission. By order of this Court on March 5, 1951 leave was granted to dispense with the printing of the transcript.

> "The 'public interest' to be served under the Communications Act is . . . the interest of the *listening public . . .*"*†

The majority of the District Court recognized the clear relevance of this to the factor of compatibility when it said:

> "Perhaps the most substantial attack made upon the Commission's order is the adoption of standards which call for an incompatible system which, as admitted by all the parties including the defendants and CBS, is less desirable than a compatible system" (R. 877).

Judge La Buy in dissenting stated:

> "It is conceded by all and it is self-evident that the best system of color television is a compatible one; that is, a system requiring no change whatever in existing receivers for the reception of black and white as well as color pictures. Indeed, compatibility is the coveted goal of all engineers and scientists engaged in the television industry" (R. 879).

The Principle of the Standard Gauge.

Appellees do not, as of course they cannot, deny that the Commission in 1940 announced the principle that the larger and more effective use of radio in the public interest requires that television standards be set on the basis

> "which will enable *every transmitting station to serve every receiver within its range*"

and that

> ". . . a serious question of public interest would arise in the future if the Commission should specify ex-

* *National Broadcasting Company* v. *United States*, 319 U. S. 190, 216.

† Italics ours throughout.

ternal transmitter performance capabilities differing from the operating capabilities of receivers in the hands of the public.

* * * * * *

"... these basic standards—*the standard gauge* they may be termed—should afford within their limits reasonable flexibility for future advances in the science of television broadcasting."*

Appellees have admitted that:

"In the entire history of broadcasting there always has been a single set of standards for . . . the particular service . . ." (Appellees' Motion to Affirm, p. 19).

They now however attempt to avoid this consistent principle. They seek to argue that incompatible color is a separate service from black and white (Appellees' Brief, pp. 93-96).

The inner and fatal inconsistency of appellees' position shows that no such distinction can be made.

In fact, the argument that color and black and white are separate services is flatly inconsistent with the whole rationale of the Commission's decision.

If it were really true that color television were a different service from black and white television, there would be no problem of incompatibility. It is the inescapable fact that color television is the same service as black and white that gives rise to the incompatibility problem, and it is the incompatibility problem primarily that has led the Commission to make the wrong decision in this case.

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* FCC, REPORT OF THE COMMISSION IN THE MATTER OF ORDER NO. 65 SETTING TELEVISION RULES AND REGULATIONS FOR FURTHER HEARING, Docket No. 5806, pp. 2, 5, 27, 28 (May 28, 1940). The record in Docket No. 5806 was incorporated by reference in the proceedings here under review at the request of Commission counsel (Tr. 8873).

For appellees to come before this court and argue out of one side of their mouths that color is a separate service from black and white television, even though it concededly must exist in the same set of channels as black and white, and to argue out of the other side of their mouths that the CBS system must be adopted now, because in effect it is part of the same service, should be enough to establish the arbitrary and capricious nature of the order under review.

This is the fundamental defect in appellees' attempt to rationalize the Commission's action on the ground that color and black and white are two separate services. As long as the Commission's order stands, there is no way the broadcaster can transmit color signals simultaneously with signals which will produce a picture on the 12,000,000 receiving sets owned by the public (R. 558-60, 609; Tr. 3411; *cf.* Tr. 4734).

If color and black and white were truly separate services, the Commission could have no legitimate concern about the number of receivers in the hands of the public which cannot get CBS color even as degraded black and white (R. 147-48, 559, 575, 794-95, 876; Tr. 2197, 3411, 4750-51, 4829, 4949, 5105-07, 5133-34, 6442, 6546, 9413-14, 9553-54, 9962, 10022). If they were separate services, the Commission would never have attempted its *tour de force* of changing the most compelling reason for rejection of the CBS system—its incompatibility—into the sole reason for its adoption now.

It is clearly an afterthought for appellees to argue that the principle, consistently followed by the Commission since 1940, of insuring that

> "every transmitting station [must] serve every receiver within its range"*

* FCC, REPORT, Docket No. 5806, p. 2 (May 28, 1940).

has no application here because incompatible color is a separate service from black and white. Unlike AM and FM, which operate in *different* portions of the radio spectrum and are therefore different broadcast services, black and white and color television operate in the *same* portion of the spectrum and are therefore the same service.

The Commission has always classified services according to the band of the spectrum which they occupy.* If they occupy different bands, they are different services. Thus, as indicated, AM and FM radio are separate services. Television, on the other hand, whether black and white or color, occupies the same portion of the frequency spectrum and is hence a single service.

That color is not a separate service from black and white television was conceded by appellee CBS as early as 1940. Dr. Goldmark, its chief engineering witness, then stated:

> "I recommend we stop making a distinction between color and black and white."**

The Principle of the Standard Gauge as Applied to Color.

Appellees assert that the principle announced by the Commission in May 1940 that television standards should be set on the basis

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* Thus the 16th Annual Report of the Commission to Congress, transmitted December 29, 1950 (after the order became effective), lists AM as a separate service, FM as a separate service and "television" as a separate service. It does *not* list color television as one service and black and white television as another. On the contrary, it expressly lists "Color television" as a *sub-division* under "Television (TV) broadcast service". This use of the singular by the Commission is to be noted and contrasted with appellees' argumentation in this Court that color is a separate service (16 FCC ANN. REP. p. ix (1950)).

** Official Minutes of 8th Meeting—Part I of Panel 1, NTSC, p. 14, December 11, 1940. The proceedings of Panel 1 were submitted as Exhibit 254 in Docket No. 5806 at p. 2303.

> "'. . . which will enable every transmitting station to serve every receiver within its range'"*

has no reference to color television because "There was no issue of color television before the Commission at that time . . ." (Appellees' Brief, p. 95). This is flatly contradicted by the statement of the Chairman of the Commission himself in April 1940.

Mr. Fly, then Chairman of the Commission, stated before the Senate Interstate Commerce Committee in April 1940:

> " . . . in a few months we may be able to fix these *basic standards,* thus giving the industry an opportunity to get on to *the standard-gage track.* Then, within the limits of that standard gage, they can go to town. They can streamline the cars and *paint them fancy colors;* they can put in various different conveniences; they can increase the speeds of trains; they can do many other things."**

The RCA color system of today does precisely what the then Chairman of the Commission said was to be permitted. It hauls not only black and white cars but color cars as well over the standard gauge track that is already in place.***

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* FCC, REPORT, Docket No. 5806, p. 2 (May 28, 1940).

** *Hearings before the Senate Committee on Interstate Commerce*, 76th Cong., 3rd Sess. (1940), on S. Res. 251, a resolution requesting the Committee on Interstate Commerce to investigate the actions of the Federal Communications Commission in connection with the development of television, p. 8.

*** The standard gauge is the 525 lines, 60 fields which has been in effect for television for 10 years (R. 569). The RCA color system operates on these same standards—525 lines, 60 fields—while CBS uses 405 lines and 48 color fields—a different and narrow gauge (R. 132, 573, 585).

In their brief appellees assert that the RCA color standards are not in every respect identical with the existing television standards.

(Footnote continued on next page)

Appellees are also wrong in stating that in May 1941, the Commission "proposed different standards for color television—375 lines, 60 frames, and 120 fields" (Appellees' Brief, p. 95). The significant fact is to the contrary.

In May 1941 the Commission declined to adopt different standards for color. It explicitly stated at that time that the line and field frequencies for color transmission "is a matter for *future* consideration".*

In making this statement the Commission obviously and wisely reserved its decision on color standards to be made in the context of the facts as they should later exist. In 1940 no compatible color system had been developed. Today a compatible color system exists.

Appellees referred to the fact that in 1947 the Commission implied that color standards which might be adopted sometime in the future need not necessarily be compatible (Appellees' Brief, pp. 95-96). Again appellees have referred to the words of the Commission but not to its action. In 1947 the Commission *rejected* a system which would have departed from the principle announced in 1940 that every transmitter must serve every receiver in the area.

The context of the color decision of today shows that the Commission's carefully guarded statements of 1940 and 1947, to the effect that color standards in the future *might* be different from black and white, have little significance in the determination of the principle of standardization to be

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(Footnote continued from preceding page)

Whether or not this is true, there is no dispute that they are identical in the respect that both use 525 lines and 60 fields and the RCA system is therefore compatible. This means that both use the standard gauge and that the Commission's principle of 1940 that every transmitter must serve every receiver would be fully complied with under the RCA system.

* FCC, REPORT, Docket 5806, p. 3 (May 3, 1941).

used now. The fundamental facts in this respect are set forth at page 45 of appellants' main brief.

Appellees did not even attempt to meet these facts in their brief.

Those facts are:

(1) in 1940 there were virtually no television receivers outstanding, and very few in March 1947;

(2) in so far as it was contemplated in 1947 that color might require different standards from black and white, it was also contemplated that color occupy *a different portion of the frequency spectrum* than black and white;

(3) it is now accepted that color will occupy the *same* portion of the frequency spectrum as black and white; and

(4) by the time the television audience reached the size it now is—45,000,000 people—compatibility became a practical necessity.

If we look then to what the Commission did in 1940 and 1947, as distinguished from what appellees say it said, it is clear that *until this case the Commission has never departed from the principle that every television transmitter must serve every television receiver within its area.* This principle is no better illustrated than by the admission of the President of CBS himself. He stated:

> "Normally in the field of radio and television, *when a consumer buys a receiver he knows that he can, in general, get all the signals in his area. That has usually been considered as the purpose of standards.*" (Tr. 7117)

The Public Interest in Continuity of Service.

The fact that 45,000,000 people who now receive television service costing $150,000,000 a year, as a result of having invested $3,000,000,000 in 12,000,000 television receivers (Appellants' Brief, pp. 1, 11-12; R. 607-08), will not continue to be able to receive that service from every transmitting station within range is referred to by appellees as "merely a temporary problem" (Appellees' Brief, p. 91).

It is suggested by appellees that these people may either discard their $3,000,000,000 investment and purchase new receivers capable of receiving CBS broadcasts, or spend an estimated half billion dollars to adapt their sets to receive a degraded black and white picture having less than half the detail of present black and white television pictures (R. 147-48, 575, 602, 594-95, 876; Tr. 2197, 3280, 3446, 3971, 4829, 4949, 5105-07, 9413-14, 9554, 10022-23). This latter expenditure is referred to as a "relatively minor amount of money" (Appellees' Brief, p. 91; see also R. 157).

The Court of Appeals of the District of Columbia was confronted with a similar problem in *General Electric Co.* v. *Federal Radio Commission*, 31 F. 2d 630 (D. C. Cir.) *cert. dismissed*, 281 U. S. 464. Pioneer radio station WGY in Schenectady had been authorized to broadcast at a stated frequency with unlimited time of operation. Because the station shared a frequency with another station in Oakland, California the Commission sought to revise WGY's license to require it to cease operating after certain evening hours when its broadcasts might interfere with reception of the Oakland station in California.

As stated by the court:

> "It appears that within 100 miles of the [Schenectady] station there is a very large population, both urban and rural, estimated to number more than

> 2,000,000 persons, residing in the states of New York, Massachusetts, Vermont, and New Hampshire, who in large part are dependent upon this station for reliable and regular broadcasting service, and that, if the station should be silenced during the early hours of the evening, as determined by the commission, the general public within this territory would be seriously prejudiced. In view of the service to the art hitherto rendered by WGY, and still continued by it, with the resulting advantage to the public, and in view, also, of the 'public convenience, interest, and necessity' of so great a constituency for full time operation of the station, it appears that *the restriction complained of is not reasonable and should not be enforced.*" (p. 634)

This judicial interpretation of the public interest as it affects 2,000,000 people is to be compared with the 45,000,000 people who are concerned with television service under the order.

Encouragement of Research.

In their main brief appellants pointed out that neither the larger nor the more effective use of radio as respects television would result if the standards chosen should be proven wrong by later research (Appellants' Brief, p. 47). It was also pointed out that in 1940 the Commission had recognized that the nature of television standards requires that they should only be fixed after a full investigation of possibilities and substantially unanimous concurrence within the industry as to their basis.

Appellees have attempted to take issue with the latter statement by asserting that the Commission set standards for black and white television in 1941

> "... in the face of violent disagreement among various segments of the industry." (Appellees' Brief, p. 105)

As their reference on the setting of standards at that time appellees cited FCC Mimeo 49851. That mimeo states as follows:

> "The Commission now finds the industry entirely in agreement that television broadcasting is ready for standardization. The standards as finally proposed by the NTSC [National Television System Committee of the industry] . . . represent, with but few exceptions, *the undivided engineering opinion of the industry*" (FCC Mimeo 49851, p. 2).

Appellees have thus flatly misstated the facts in respect of the status of engineering opinion within the industry at the time of the adoption of the existing television standards.*

Converters for the RCA System.

Appellees also assert in defense of the Commission's action that under the RCA system existing set owners cannot receive color pictures on their sets, "which are incapable of being converted". (Appellees' Brief, p. 90).

These are wholly unwarranted statements.

RCA demonstrated on the record on April 6, 1950 two 1948 model television receivers which had been modified to include color components (Tr. 8130-32). These are described in Exhibit 382, received by the Commission in evidence during the testimony of Dr. Engstrom (Tr. 7930).

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* The position of appellants in this respect is also confirmed in the definitive study of the radio and television industry. MACLAURIN, INVENTION AND INNOVATION IN THE RADIO INDUSTRY (1949). The adoption of television standards is discussed in Chapter X, entitled "Government Regulation and Technical Progress—FM and Television: 1900-1941".

In the petition of October 4, 1950, RCA offered to show to the Commission two other prototypes of converters.* The Commission refused to look.

It is therefore highly improper for the Commission now to say that with the RCA system existing set owners cannot receive color pictures on their sets which "are" incapable of being converted.

This misrepresentation of the RCA system, in respect of its *present* ability to be converted, illustrates in the most compelling way the unreasonableness of the Commission in the denial of RCA's petition of October 4.

This Court is now told flatly that under the RCA system sets "are" incapable of being converted. The fact is the Commission was petitioned to view converters and refused to look.

Compatibility.

Appellees assert that appellants' position in respect of compatibility is that receiving color transmissions in black and white on existing sets is more important than color itself (Appellees' Brief, p. 90).

This wholly distorts the position of appellants. The achievement of compatibility was a scientific accomplishment of first importance to color itself. For it is compatibility that makes it economically practical for the broadcaster and the sponsor to broadcast in color, their best programs, in choice viewing time (R. 608; Tr. 7229-31, 8027; *cf.* Tr. 2983).

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* As more fully set forth on page 26 in the discussion of this petition below, RCA offered to show to the Commission improvements in the performance of the RCA system "with particular reference to those points about which the Commission expressed doubts" in its First Report (R. 408-49). Thus RCA incorporated by reference points referred to in the First Report. One of these points was converters (R. 149).

With a compatible system the broadcaster does not have to wait for color receivers to appear in quantity (Tr. 7229-30). Nor does he have to confine color broadcasts to fringe time (Tr. 2980, 2983).

From the standpoint of the public interest, compatibility thus becomes of first importance in promoting color itself (R. 608-09; Tr. 7230-31). With a compatible system the broadcaster will have every urge to bring color to the public. Without it many cannot afford to do so.

It would be the greatest mistake to conclude that compatibility is simply a method of continuing black and white reception to present owners of receiving sets. The incompatibility of the color standards adopted, on the other hand, is bound to be an important factor in delaying the coming of a sound color service on a national basis (Tr. 2980, 2983, 7177, 7229-32, 8015-16, 8027, 8781, 10002-03).

Incompatibility.

Appellees assert that the Commission considered the compatibility situation and decided to pass up compatibility as a requirement for a sound color system in the public interest (Appellees' Brief, pp. 90-91). To support this assertion they cite the First Report in which the Commission referred to compatible systems as demonstrated "to date" (R. 156). But it was in the same Report that the Commission set forth its desire to look at improvements in the existing color systems (R. 165-66). Thus, the Commission itself recognized that what had been demonstrated up to May 1950 was not determinative of the case.

The Commission stated that its conclusion as to compatibility was based on a study of the "history of color development over the past ten years" (R. 156). But in saying this the Commission failed to point out that *many of these ten years were war years*, when the efforts of electronic engineers were addressed to imperative needs of

defense. Nor did it make any reference to the fact that the realization that color should operate in 6 megacycles came only in 1948—only about one year, instead of ten, before the color hearings commenced (R. 577-78; Tr. 2657-59; Exhibit 206).

Appellees' assertion that the choice was between color and compatibility is wholly without basis in fact. On the contrary, as Commissioner Webster stated in speaking of compatibility in a color system:

"That can be done . . ."*

It is a shocking exhibition of defeatism for the Commission to tell this Court that the electronics industry, which produced the dynamic art of television itself, lacks the capacity to achieve a satisfactory compatible system.

This is particularly true in view of the almost unanimous testimony of electronics experts who appeared before the Commission that a compatible system is possible, is desirable and, in fact, is necessary to safeguard the service of the people—now 45,000,000 people—who receive television service (R. 589; Tr. 3896, 4849-50, 5903, 8199-200, 8266, 8385-86, 9397, 9495, 9696, 9866, 10046-47, 10057).** It is also

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* *Hearings before the Senate Committee on Interstate Commerce*, 81st Cong., 1st Sess. (1949) on the nomination of E. M. Webster to the Federal Communications Commission, p. 20.

** Appellees endeavor to minimize the significance of incompatibility by asserting that "only 63 geographic points now have television service; there are 1336 other points for which stations are contemplated . . ." (Appellees' Brief, note 111, p. 92). This is perhaps the most misleading statistic in their brief.

The 63 points include major metropolitan areas such as Boston, Chicago, Los Angeles, Philadelphia, New York, and Washington, while the 1336 include places with a population as low as a few hundred (see R. 45-85).

While of course all people are important in dealing with television service, the impression sought to be conveyed by the ratio of 63 geographic points to 1336 geographic points, when translated into the number of people in the 63 points against the number in the 1336 points, is grossly misleading.

true in view of the fact that not a single witness before the Commission except appellee CBS favored the adoption of an incompatible system.

We have heard much in this case about the alleged unreadiness of the RCA color system.

But the fundamental fact of incompatibility in the CBS system shows that that system is far less ready, *on system fundamentals*, than the RCA system. Taking CBS' own story of ten years of research, it has yet to overcome the problem of incompatibility.

Incompatibility is a problem which should be solved *in the laboratory.* It should be dealt with as a research expense of the company which sponsors a color system. *It should not be dealt with at the expense of the public.* But the adoption of the CBS system is an attempt to transfer the expense of incompatibility to the public, which must buy adapters, at a cost of half a billion dollars, to overcome the defect of incompatibility in that system (R. 602, 876).

Incompatibility is a fundamental matter which cannot be dodged. *An incompatible system is nothing more nor less than a system that is not ready from the engineering standpoint.* The real name for an incompatible system is an unready system.

Appellants submit that the Commission acted contrary to its basic obligation to serve the public in adopting a color system in this fundamental state of unreadiness.*

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* Appellees have attempted to insinuate that the television industry did not push color because of an alleged desire to maintain the *status quo* of black and white production. This argument is to be contrasted with the fact that the very television industry of today was created by companies which started off as radio companies. If their interest lay in maintaining the *status quo* rather than in providing new and better electronic equipment for the public we would never have the television industry we have today. This dynamic industry thrives on change.

Controversy in respect of color television has arisen from the fact that leaders of the industry have felt it wrong to ask the public

(Footnote continued on next page)

POINT II.

Reply to Argument that the Commission's Refusal to Look at the RCA Improvements Was Reasonable.

The fact of great improvement in the RCA system during the latter part of the hearing is undisputed.

As stated by the majority of the District Court:

> "Admittedly, much progress was made during the latter portion of the hearings and, as claimed, after the hearings closed, in the development of a compatible system of color television. *Particularly was such progress made by RCA*, and as we view the situation the most plausible contention made by plaintiffs is that the Commission abused its discretion in refusing to extend the effective date of its order so that it might further consider the situation, and particularly the improvement which it is claimed had been made by RCA and others." (R. 871-72)

Even appellee CBS—who had told the Commission in October 1949 that "nothing" could improve the RCA system—admitted six months later that the RCA system had improved "a thousand percent" (Tr. 3585, 8882).

The same appellee had told the Commission as late as February 1950 that the Commission "may have *a long wait*" for the RCA tri-color tube (Tr. 6211). Twenty-four

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(Footnote continued from preceding page)

to invest in an inferior color system that is bound to be superseded by a good one. And, unless this order becomes effective, time has proved them right. The color standards urged by appellee CBS in 1940, had they been adopted, would have given us a system that flickered like the old-fashioned movies; and the color standards proposed by CBS and rejected by the Commission in 1947, had they been adopted, would have made a most wasteful use of the frequency spectrum. But appellee CBS has said that its system today is fundamentally the same as that proposed in 1947 and in 1940 (Tr. 3078, 8885-86; 8891-92; FCC Docket 7896, p. 369).

days later RCA demonstrated that tube to the Commission (Tr. 7475). Appellee CBS admitted, on cross-examination, that the tri-color tube "was an admirable accomplishment" (Tr. 11282).

Appellees seek to sidestep the significance of this improvement. They assert the Commission's First Report is still to be read as saying that there was no reasonable probability of improvement of the RCA equipment so the Commission had no choice. It had to take an incompatible system.

The importance of this position first of all is for what it does *not* claim. Appellees have not claimed that the RCA system was rejected because of alleged unsuitability in May 1950. They have retreated to the position that it was not adopted because it had not then been successfully developed "*and* . . . there is no reasonable probability that such a system will be developed" (Appellees' Brief, p. 90).

The interdependence of past and future here is clear. The Commission's position fails if it is unsupported on either ground.

As to the state of the development of the RCA system in the latter part of the hearing, we believe that the observation of the majority of the District Court and the admissions of appellee CBS speak for themselves. There are in addition the short but compelling statements of two of the Commissioners which have been referred to in our main brief (pp. 70-71).*

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* These may be compared with the reckless claim of appellees in the court below that the RCA system produces only "splotches of color in a laboratory" (Tr. of Proc. 240). Appellees seek to convey the same impression here by inference from a long review of alleged imperfections of RCA color equipment. The short answer to this laborious effort is indicated in the statement of the District Court set forth on page 17, *supra*, and in observations of some of the Commissioners themselves such as

> ". . . We have seen that [RCA] system and *it produced beautiful color*" (Tr. 6900).

The Commission's Desire to Look at Improvements.

The more remarkable of appellees assertions is its claim the Commission held that improvement for RCA was not possible. This, if true, would be an extraordinary finding for an administrative agency—especially one dealing in an art as dynamic as television.

Appellees misconceive the meaning of the First Report. For all its criticism of aspects of the RCA system, that Report can be read only as recognizing that the RCA system had shown such improvement that it should not be rejected without another look at further improvement.

If this were not so, *why did the Commission in the First Report say it wanted another look at*

> "*improvements in existing color systems* which have been informally called to our attention since the hearings closed."? (R. 165)

Why did the Commission want to have another look at these improvements if it were true, as appellees now argue, that the Commission had concluded the RCA system is not capable of improvement?

It violates common sense for appellees to construe the First Report as meaning the RCA system was not suitable *and* could not be improved, when that very Report says that the Commission wanted to see the RCA improvements.

It is true that its willingness to look at improvements was based on conditions. These were the acceptance, without a hearing, of "bracket standards" under the time schedule prescribed by the Commission (R. 166-68).

In their brief in this Court appellees assert that appellants "wholly distort" the action of the Commission

by describing bracket standards as an attempt "to coerce manufacturers". Appellees now say that

> "The bracket standards proposal was clearly an exploratory *suggestion* and a *request* for information . . ." (Appellees' Brief, p. 99)

It is interesting to compare this characterization by appellees in argument with the contemporaneous characterization of bracket standards by Commissioner Jones, in his separate opinion favorable to the CBS system. He stated that:

> "The Commission . . . as a part of this decision would *force* the industry to adopt bracket standards . . ." (R. 196)

This analysis by Commissioner Jones of what the Commission did in adopting bracket standards speaks for itself. It makes ridiculous appellees' argument here that bracket standards were a "suggestion" or "request". And it wholly supports the position of appellants.

We have then this situation: the Commission clearly stated in its First Report that it wanted to see the improvements in the RCA system. This however was subject to the bracket standards condition, which proved to be impossible of fulfillment (R. 166-68, 314-16, 870).

Even if it were assumed that the Commission is right in arguing that it was asking only for information rather than applying "force" in respect of bracket standards,* there is no dispute in the record that the bracket standards condition turned out to be impossible (R. 421-27, 430, 870).

The Commission was thus left with its express desire to see the improvements in the RCA system, subject only to a condition that had been swept away.

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* Both the illegality and impossibility of the bracket standards are discussed on pages 128-34 of appellants' main brief.

It was in these circumstances that RCA's petition of October 4, 1950 to look at its improvements was filed (R. 408-09). This was *before* the order was issued. Both this fact and the clearly expressed desire of the Commission itself to look at improvements distinguish this case from *United States* v. *Pierce Auto Lines*, 327 U. S. 515, and *Interstate Commerce Commission* v. *Jersey City*, 322 U. S. 503, cited by appellees on page 120 of their brief.

It is ridiculous to assert now, as appellees do in argument, that the RCA petition was filed at a time when it was known that the Second Report and order were about to issue (Appellees' Brief, p. 135). The parties to the hearing were asked to file comments on the First Report. They had no reason to suppose that the Commission, which had said it wanted to see the RCA improvements, would insist upon the condition of bracket standards when that condition had been shown to be impossible.

No amount of argumentation by appellees can read out of the First Report the overriding fact that the Commission said it wanted to see the improvements in the RCA system before adopting an order, and that that was one of the principal reasons it then refused to approve the CBS system.

The Probability of Improvement.

There were strong reasons for the Commission to believe that the improvements in the RCA system had reality.

There was first of all the general, but nonetheless important, reason implicit in the electronics art which created the television industry.

The instinct of the Commission would tell it that an industry which had done these things must be capable of improvements in an electronic color system. Its instinct must have told it that the fact that the RCA system was a

new system, while CBS admitted that its system was fundamentally the same as it had been ten years before (Tr. 3078, 8885-86, 8891-92), was not a point against the RCA system but rather a point in its favor.

As the distinguished scientist and President of Harvard University, James B. Conant, has said:

> "Tremendous spurts in the progress of the various sciences are almost always connected with the development of a *new technique* or the sudden emergence of a new concept."*

In concrete accomplishment, the RCA system had to its credit, among other advantages, two outstanding successes in areas where CBS had tried and failed. One was the development by RCA of a compatible color system (R. 149, 573; Tr. 2658-60, 9495). The other the development by RCA of a tri-color picture tube (Tr. 7989, 7994, 10039-40, 11282; Exhibit 382).**

As goals of research, both of these developments presented difficult engineering problems. Their achievements were scientific accomplishments of first importance to the development of color.

It is compatibility that makes it economically practical for the broadcaster to broadcast in color, his best programs, in choice time.

The RCA tri-color tube is a device upon which all color systems recognize their dependence.

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* CONANT, ON UNDERSTANDING SCIENCE, 73-74 (1947). President Conant is also in point on some of the difficulties with its apparatus which RCA encountered in the early part of the hearing. As he has said:

> ". . . new concepts only develop after an arduous period of experimentation." (*Id.* at p. 36)

** In 1941 CBS told the Commission it had developed a tri-color tube. In 1950 it told the Commission it had failed in its attempt to develop such a tube (FCC Docket No. 5806, p. 2607; Tr. 6539-40).

Even Dr. Goldmark of CBS conceded, on cross-examination that the RCA tri-color tube

> ". . . was an admirable accomplishment." (Tr. (11282)

The majority opinion stated with respect to compatibility:

> "Perhaps the most substantial attack made upon the Commission's order is the adoption of standards which call for an incompatible system which, as admitted by all the parties including the defendants and CBS, is less desirable than a compatible system" (R. 877).

In his dissenting opinion Judge La Buy stated:

> "It is conceded by all and it is self-evident that the best system of color television is a compatible one. . . . Indeed, compatibility is the coveted goal of all engineers and scientists engaged in the television industry" (R. 879).

Appellee CBS likes to claim that its color research has been going on for ten years. If that is so, it is the best proof of the measure of achievement of an electronics laboratory that solves the problem of incompatibility. The President of CBS himself has said:

> "We would love to have compatibility" (Tr. 7177)

But in the ten years CBS talks about, it has failed to find any engineering solution to its problem of incompatibility. RCA, on the other hand, has succeeded in developing a compatible system.

The Commission itself, by virtue of its day-to-day contact with an art which this Court itself has characterized

as so dynamic,* was in an awkward position to deny the potentialities of an electronic system for improvement.

In this case the Commission had had the experience of seeing improvements in the RCA system unfold before its eyes.

In the classic overstatement referred to, the Commission had been told by appellee CBS in October 1949 that "nothing" could improve the RCA system (Tr. 3585). Six months later CBS was to admit that the RCA system had improved "a thousand percent" (Tr. 8882).

In these circumstances the Commission had every reason to doubt the assertions of CBS—now repeated here—that "nothing" can improve the RCA system.**

The Time to Look.

The desire to see improvements expressed by the Commission in the First Report (Par. 148, R. 165-66) was properly a desire to see improvements in the several systems. That Report expressly provided that any such improvements would be shown to the Commission "during the period from December 5, 1950 to January 5, 1951" (R. 169).

These were the very dates on which RCA, in its petition, offered to show improvements (R. 408). And they were selected, as the petition itself indicated, for the obvi-

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* *National Broadcasting Company v. United States*, 319 U. S. 190, 219.

** Appellee CBS had told the Commission in 1944 that the present 525 line standards

> ". . . are simply not good enough to put television over as a real public service or even as a going enterprise." (Tr. 8621-22)

This was said by appellee of the television system that today reaches 45,000,000 people; of the system that appellee now says is proceeding at such a pace that, unless arrested by the device of bracket standards, it will engulf any system that is out of step (incompatible) with it.

ous purpose of meeting the time schedule the majority of the Commission itself prescribed.*

In dealing with improvements, the First Report did not demand that apparatus as demonstrated during the period December 5 to January 5 be fully developed. It was enough that it should at that time show "reasonable prospect" of satisfying the Commission (Par. 154; R. 169). The date of fulfillment of this reasonable prospect was left open in the First Report.

The offer to show improvements in RCA's petition went even beyond the requirements of the First Report. It accepted the dates December 5 to January 5 for the first showing, *and* offered a particular date to meet the reasonable prospect requirement (R. 409).** Thus, the petition offered *more* than the First Report asked.

Nor was it, as appellees imply, vague in respect of what improvements would be shown. It stated specifically that the improvements to be shown would be those which had been "made in the performance of the RCA system, *with particular reference to those points about which the Commission expressed doubts*" in its First Report (R. 409). This incorporation by reference of the points referred to in the Commission's First Report was obviously a convenient and useful device to specify, with particularity, those points that would be covered at the showing.

Appellees are clearly wrong in characterizing the petition as a request that the Commission "postpone decision and some nine months later, start over again" (Appellees' Brief, p. 136). The petition accepted the Commission's own

* The beginning date of the showings was only 15 days beyond that later specified for the order to go into effect. If the Commission thought 15 days was too long to wait, it could of course have granted the petition on condition the date be advanced by some period.

** June 30 of this year.

dates, December 5 to January 5, for a demonstration of improvements made by RCA; and the period to June 30 to view experimental broadcasts under the RCA, CBS, CTI and other systems.

The fact that RCA alone was to show its improvements in the first stage was to provide proof that RCA had actually made improvements of such significance as to justify the second stage. If such improvements failed to materialize, it is clear that the second stage of showings need not come into being, and the only time elapsed would have been perhaps 30 days beyond November 20—the effective date of the order.

Thus, it is wholly inaccurate to characterize this petition as one for delay. It was in fact a petition to implement the Commission's statement in its First Report that

> "... the institution of these proceedings stimulated great activity in the color field and ... since fundamental research cannot be performed on schedule, *it is possible that much of the fruit of this research is only now beginning to emerge.*" (Par. 148, R. 166)

The Refusal to Look.

The denial of RCA's petition to look at these improvements in the RCA system is one of the errors of the Commission principally assigned for setting aside its order. The Commission could not deny this petition without brushing aside its own express desire in the First Report to look at improvements in all color systems.

But in the Second Report that is just what it did. It characterized the improvements in apparatus RCA had offered physically to show to the Commission as nothing but a "paper presentation" (Second Report, Par. 15, R. 419; see Argument for appellees in the District Court, Tr. of Proc. 241).

And the Commission added that the "improvements in systems" did not meet its tests (R. 419-20). This statement was made *without even looking at the improvements* to which it referred.

Appellants submit that this is one of the remarkable utterances in the history of administrative agencies—that improvements which the Commission had said it wanted to see, was petitioned to see, and then refused to see, did not meet its tests.

How did it know?

Appellees argue that there must be a stopping point somewhere in looking at improvements, and that that point is within the particular province of the Commission (Appellees' Brief, p. 139). The short answer is the one already indicated—that the dates selected for the showing of "reasonable prospect" were not appellants' dates; they were the Commission's dates—beginning just 15 days beyond the effective date of the order.*

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* Appellees purport to justify the denial of the October 4 petition on the ground that the public might be injured in having to purchase more expensive externally adapted sets than if it got internally adapted sets. At pages 140 to 142 of their brief, this point is labored at length. The answer is the one given by the majority of the District Court. The entire argument of appellees is based upon the assumption that this Court will necessarily sustain the order. It ignores a contrary possibility (R. 877). If for any reason the order should not be sustained, *then the entire cost to the public of adaptation would be wasted*, since a compatible system involves no such expense whatsoever to the public.

Moreover, the cost figures referred to by appellees are wholly inaccurate and unreliable, as well as obsolete. RCA did not testify, as claimed by appellees, that as a practical matter sets could be internally adapted for only "$7 to $10". Its testimony was precisely to the contrary—that such adaptation is not practical (Tr. 10091). The $7 to $10 basis represents what it would have cost at that time to do an impractical thing had any one been willing to do an impractical thing (Tr. 10091). But RCA expressly testified that as a practical matter it could and would not internally adapt sets on the basis which would require the purchaser of a receiver

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Finally, appellees claim the Commission had no choice but to refuse to look at improvements, in spite of its express desire in the First Report to do so, by reason of the fact that it "would aggravate the problem of incompatibility" (Appellees' Brief, p. 24). The specific remedy for incompatibility was referred to in the preceding point. It is enough here that the added cost to the public of *incompatibility* is one of the principal reasons the Commission should have looked to an improved compatible system.

For incompatibility is nothing more or less than a problem to be solved in the laboratory. It should not be dealt with at the expense of the public by forcing on them the cost of adapters—whether internal adapters or external adapters. The real solution is *no* adapters; and no adapters means a compatible system.

The action of the Commission in refusing to look at improvements in the RCA color system last December was clearly contrary to its first obligation to serve the public interest, and was therefore contrary to law.*

(Footnote continued from preceding page)

to jump out of his seat and make adjustments to his set at frequent intervals during an evening's television reception (Tr. 10048-49). This testimony is clearly of record, and the use of figures by appellees in disregard of this testimony renders their whole argument on this aspect of the case both inaccurate and unwarranted. The figures used by appellees are also obsolete by reason of cost increases plus the enactment of an excise tax on television components.

* Appellees' contentions that the Commission properly refused to consider the Condon and Progress Reports as evidentiary material have not been treated again in this Reply Brief because such contentions are clearly untenable.

Appellees have failed to meet the issues presented in Point IV in Appellants' Brief (pp. 115-34), viz. that the Communications Act, the Commission's consistent administrative practice, and the Administrative Procedure Act required the Commission, in a rule making proceeding of this type, to consider the Condon and Progress Reports as evidentiary material.

Appellees have not even mentioned appellants' point that in the setting of standards for AM broadcasting, FM broadcasting, and

(Footnote continued on next page)

POINT III.

The Action of the Commission in Ruling Out Compatible Color in Competition with Incompatible Color is Unlawful.

The Commission has adopted a system of color television whereby every television transmitting station will *not* serve every receiver within its range (R. 147, 559, 575, 794, 876; Tr. 3411, 4612, 4750-51, 4829, 5134, 6442, 6546, 9962, 10022). By its action the Commission has deviated from its consistent administrative procedure and construction of the Act (R. 559, 563, 608-09).

(Footnote continued from preceding page)

the existing television service, the Commission considered and avowedly based its determination upon written data from all sources, along with evidence presented at hearings (Appellants' Brief, p. 117).

Appellees are significantly silent in regard to the point that in their brief in the *National Broadcasting Co.* case the Solicitor General and the Commission told this Court that in the rule making proceeding there involved the Commission had used and had the right to use data not presented at the formal hearings (Appellants' Brief, pp. 125-26).

Appellees attempt to construe Section 4(b) of the Administrative Procedure Act as requiring the Commission to consider "all relevant matter presented" in a rule making proceeding *only* when all the data is submitted in *written* form (Appellees' Brief, p. 132). But Section 4(b) reads that the agency must consider all relevant matter after having allowed parties to submit "written data, views or arguments, *with or without opportunity to present the same orally . . .*"

The statute thus clearly covers a rule making proceeding of this type in which the agency has at its option afforded the opportunity for oral presentation by holding a hearing. The statute is plain that the agency must consider *all* relevant data presented, written and oral, in reaching its decision. Appellees' purported construction of the statute flies in the face of these plain words.

As appellants have stated, the admitted refusal of the Commission to consider such data as evidentiary material (Commission's Brief in the District Court, p. 28; Motion to Affirm by Appellees in this Court, pp. 21, 23) vitiates the Commission's order.

The Commission has for the first time adopted multiple standards for a single service—a broad standard gauge of 525 lines, 60 fields for black and white television and a narrow gauge of 405 lines, 48 color fields for incompatible color television.

At the same time the Commission has refused to allow the broadcasting of RCA compatible color which operates on the broad standard gauge of 525 lines and 60 fields and which is receivable in black and white on all existing sets (Tr. 2658-60; Exhibits 206, 209).

It is conceded that the RCA color system is a fully compatible system—that it can be received in black and white by the 45,000,000 people who now have television service, on 12,000,000 receivers, without any modifications in those receivers whatsoever (R. 147). And no contention was made in the Commission's Reports that the quality of the black and white picture produced by the RCA color system on existing sets was a ground for denying this system to the public.

Moreover, appellees also concede that the RCA color system does not produce any interference by one broadcaster with the signals of another (Appellees' Brief, p. 107).

The clear and uncontradicted fact on the record is that the adoption by the Commission of compatible color television standards would hurt nobody (Tr. 6546).

As the Vice President and Chief Engineer of CBS stated:

> "There is one non-compatible system. . . . There are two compatible systems . . . I couldn't sit here and tell you not to adopt standards of any of those systems because they don't have that device *because nobody would get hurt by it if you do. They are compatible*" (Tr. 6546).

Under these circumstances it is clear:

1. That the Commission did not have the authority to rule out compatible color in competition with incompatible color; and

2. That such prohibition cannot be sustained where there are no administrative findings to support it.

No Authority to Rule Out Compatible Color.

Appellees have failed to meet these issues.

The question here is whether the Commission has the authority, in a competitive industry, to outlaw a system whose transmissions *hurt no one* and are receivable on the 12,000,000 sets in the hands of the public operating on the standard gauge.

Appellees argue that "from the beginning . . . the Commission has established only a single set of standards" for "a radio service" and that this has been "the Commission's own administrative construction [of the Act], followed over a long period of years . . ." (Appellees' Brief, p. 105).

Appellants agree that, until this case, this has been the settled rule of administrative construction under the Act. This is the construction and principle of standardization which appellants have urged upon the Commission in advocating the adoption of a compatible system—one which operates on the standard gauge and is receivable on all television sets operating under the present standards.

It is the Commission which has here deviated from the principle of standardization by prescribing a narrow gauge for color. It is the Commission which has not adopted a single set of standards for the television service.

Having deviated from the principle of standardization, having adopted multiple standards for television, the

question then presented is whether the Commission has the authority to prohibit a broadcaster, who will not interfere with another broadcaster, from operating on the existing standard gauge track.

Appellees rely on Section 303(e) of the Communications Act (which was derived from Section 4(e) of the Radio Act of 1927) as establishing the Commission's power to bar a system which operates on the standard gauge.

Section 303(e) authorizes the Commission to

> "Regulate the kind of apparatus to be used with respect to its external effects and the purity and sharpness of the emissions from each station and from the apparatus therein;"

The legislative history which appellees cite (Appellees' Brief, p. 104) as authorizing the Commission, under Section 303(e), to set standards *does not even relate to appellees' contention.* It contains no mention whatsoever of the setting of standards.

The question asked of Senator Dill, and referred to by appellees, was whether a broadcast licensee could attach a device to his transmitter which would make his transmitted signals *not* receivable on all existing sets and which would require persons desiring to receive these signals to buy a special attachment for their receivers. Senator Dill stated that the Commission could deal with this by revoking the broadcaster's license for a violation of its terms (68 CONG. REC. 3035 (1927)).

The regulatory power to which this legislative history refers is exactly the opposite of that which the Commission has sought to exercise here. The Commission cannot find authority in this legislative history to prohibit the transmission of signals which *are* receivable by every existing receiver without adding any special attachments to the re-

ceiver. It is this assertion of authority that appellants challenge.

Appellants do not now contest the Commission's assumption of power of a decade ago to set standards upon a basis by which every transmitter must serve every receiver in its area. That is the principle of the standard gauge.

Appellants do challenge the Commission's authority to do the converse—to *prohibit* a system of broadcasting under which every transmitter would continue to serve every receiver in its area, a system of broadcasting which operates on the standard gauge, which does not cause interference, and from whose transmissions "nobody would get hurt" (Testimony of appellee CBS, Tr. 6546).

There is no authority in the Act, in the legislative history of the Act or otherwise to support the Commission's denial to the public of the advantages of compatible color transmissions.

Absence of Findings On Competition Between Systems.

Appellees concede that the Commission did not consider or make any findings whatsoever on the possibility of permitting the RCA compatible color system to compete with the CBS system (Appellees' Brief, pp. 111-12).

a. The Issue was Presented to the Commission.

As a belated excuse for the Commission's failure to make such findings, appellees now claim that the issue of competition between color systems was "not really tendered by the parties"* (Appellees' Brief, p. 112). This is not

* In this connection, appellees state that the witnesses were "virtually unanimous" in their opposition to "multiple standards". What appellees have failed to tell this Court is that, with the exception of Stanton of CBS, *the opposition of the witnesses cited by appellees to multiple standards was opposition to the multiple*

(Footnote continued on next page)

in accord with the facts. The position of RCA on this issue was officially presented to the Commission by Brigadier General David Sarnoff, Chairman of the Board of RCA. Only three pages earlier in their brief appellees quote this very testimony.

General Sarnoff recommended that if the Commission should adopt standards for an incompatible system, it should permit also the broadcasting of compatible color (Tr. 10093-95). He urged that the standards set by the Commission be broad enough to permit any color television systems which met the basic requirements of compatibility, definition equal to the present high-quality television standards, and transmission within a 6-megacycle channel (Tr. 10046-47).

In fact, appellee CBS itself, through its vice-president in charge of color television, told the Commission that this issue was before it for determination. Commissioner Hennock questioned Adrian Murphy of CBS on the possibility of allowing RCA compatible color in competition with CBS incompatible color.

Commissioner Hennock inquired,

> "Now can you envision an RCA color set with that new RCA tube in it, and all the other equipment that

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(Footnote continued from preceding page)

standards which would necessarily result from adoption of the incompatible system.

The witnesses—with the exception of Stanton of CBS—urged the principle of standardization within the television service by the adoption of a compatible system. But the Commission disregarded this "virtually unanimous" opposition and by adopting the CBS incompatible system itself prescribed multiple standards for television. The Commission cannot take the testimony of men who favored only a compatible system and cite it as testimony against allowing that same compatible system to compete. Witnesses upon whose testimony appellees rely in their brief (Appellees' Brief, p. 113), did not say that (Baker, Tr. 9685; DuMont, Tr. 5729, 9412, 9413-14; Smith, 8173, 8184-86). In fact, even Goldmark of CBS conceded that "nobody would get hurt" by a compatible system (Tr. 6546).

goes with the RCA color set, and assuming there were a Columbia adapter in that set, and then one of those converters of Mr. Chapin's in that set, would you be able to get both the Columbia color system and the RCA system through that set?

"The Witness: Yes, Miss Hennock, you would.

"Commissioner Hennock: Then what is wrong with that idea?

"The Witness: *That is a fine idea.*

* * * * * *

"I said before that the Commission has a choice of saying there will be one system or there will be two or more systems." (Tr. 6248-49).

Appellees are simply mistaken in stating that the issue of allowing compatible color to compete was never posed to the Commission. The issue was posed squarely and the Commission was therefore obligated to make findings on this point.

b. The Commission Made No Findings on The Issue Presented.

Appellees have conceded (Appellees' Brief, pp. 111-12) what is self-evident from the First and Second Reports, that the Commission made no finding that the broadcast of compatible color in competition with incompatible color would not be in the public interest. Appellees have conceded that the Commission did not consider whether there was any middle ground between the exclusive adoption of an incompatible system and the exclusive adoption of a compatible system. Appellees have admitted that the Commission "never reached the question" (Appellees' Brief, p. 112) of considering the possibility or advisability of permitting the broadcasting of compatible color together with the broadcasting of incompatible color.

Appellees evade the legal issues raised by the Commission's complete failure to consider the question of permitting the RCA compatible system to compete with the CBS incompatible system. Appellants' main brief establishes that:

1. The Commission did not see fit to disclose the factors prompting its action in ruling out competition. It achieved that result on *unexpressed and unexplored assumptions* which mold for years to come the industrial, social, and technical patterns of a most dynamic and important medium of mass communication.

Under *Jacob Siegel Co.* v. *Federal Trade Commission*, 327 U. S. 608, such failure to treat the question requires a reversal of the District Court's judgment (Appellants' Brief, pp. 104-05).

2. The Commission made no findings in support of its conclusion *sub silentio* on competition. There is not a single finding which establishes either the Commission's jurisdiction or reasonableness in ruling out compatible color broadcasts. Such lack of findings requires a reversal of the District Court's judgment under a long and unbroken series of decisions by this Court (Appellants' Brief, p. 112).

3. Counsel may not substitute inference and argument for administrative findings. Otherwise, the findings rule could be so easily evaded as to be of no meaning. *Securities and Exchange Commission* v. *Chenery Corp.*, 318 U. S. 80, 92. Indeed, this very Commission has been told by this Court that an inference may not replace a finding. *Ashbacker Radio Corp.* v. *Federal Communications Commission*, 326 U. S. 327, 333. See also *United States* v. *Baltimore & Ohio R. R.*, 293 U. S. 454, 463-64; *Florida* v. *United States*, 282 U. S. 194, 215.

c. Purported Justification.

Appellees' argument rests entirely on one premise—the Commission's findings in respect of the RCA system. This premise, appellants submit, is unsound for the following reasons:

First, the Commission's findings on the RCA system, *even if assumed to be valid*, have no application to the issue of competition. They are directed solely to the question of whether the RCA system should be *exclusively* adopted. Such findings are totally different from the findings which would be necessary to serve as the basis for a conclusion that a compatible color system should not even be permitted to compete.

The criteria and evaluation of a system looking to its establishment on a competitive basis are entirely different from the criteria on which a system is evaluated for adoption on an exclusive basis.

Only if the Commission had expressly considered a color system from the point of view of establishing it on a competitive basis and had adopted criteria looking to an evaluation of a system on a competitive basis, could it determine that it was unsatisfactory as a competitive system.

The fact that the Commission may have found a system unsatisfactory when judged by criteria for an exclusive system has no relevance as to whether the same system would be satisfactory if judged on a competitive basis.

Moreover, the need for such findings was particularly in order in view of the admitted compatibility of the RCA system. The Commission had before it a system which met the basic criteria laid down by the Commission in the notice which convened the hearing. In the view of CBS' own Vice President, this meant that "nobody would get hurt" by adoption of the RCA system. If "nobody would get hurt"

by the broadcasting of a system which meets basic criteria, the Commission was obviously required to justify its complete prohibition of such broadcasting by specific findings.

With a compatible system before it, the Commission could exclude it from the area of competition only if it could make findings as to its performance which would outweigh the fundamental fact, conceded by appellee CBS, that "nobody would get hurt" by its use.

There are no such findings in the Commission's Reports.

The application of the *Siegel* case is therefore clear. Having made *some* findings, the Commission drew conclusions from them. But, in the language of the *Siegel* case, "the Commission seems not to have considered" the issue of competing systems. There is "no indication that the Commission considered the possibility of such an accommodation." The Commission's "expert opinion is entitled to great weight in the reviewing courts. But the courts are not ready to pass on the question whether the limits of discretion have been exceeded in the choice of the remedy until the administrative determination is first made" (327 U. S. at pp. 613-14).

Appellees seek to discredit the *Siegel* case in two ways: by distinction and by citing a case from the Court of Appeals of the District of Columbia.

The attempt to distinguish the *Siegel* case rests on an argument that, in effect, the *Siegel* rule does not come into play if the findings which are made can support an alternative but unexpressed conclusion (Appellees' Brief, p. 112, n. 128).

There are two answers to this: (a) The *Siegel* case stands for exactly the opposite rule—the case is a direct holding that *express* consideration must be given to possible alternatives; (b) as we have shown, the findings here do *not* support the conclusion because they are incom-

plete. Findings concerning use of the RCA system on an exclusive basis are of no relevance in establishing that the RCA system should be ruled out on a competitive basis.

The *Simmons* case, cited by appellees *, does not hold otherwise; indeed, the facts there only point up the defect in the Commission's action here.

There the court was concerned with *mutually exclusive* license applications and ruled that one, once denied, did not merit later comparison with the other. The case serves to emphasize the very point which the Commission seems to have forgotten and which appellees avoid. The very issue to be decided here was whether an incompatible system *should* be adopted exclusively. It was a live, open issue before the Commission. But the Commission ruled *as if* it were dealing with already mutually exclusive applications.

Finally, appellees neglect entirely the fact that the Commission made no findings which can serve as a foundation for the *exercise of jurisdiction* in ruling out the RCA color system in competition with the CBS system.

Five cases** are cited in appellants main brief (p. 112) which hold flatly that an administrative order cannot stand when "quasi-jurisdictional" findings are lacking. Nowhere does appellees' brief address itself to these cases. Instead, that brief attempts to substitute arguments for these missing quasi-jurisdictional findings—an attempt which, we have shown, will not be countenanced by this Court. Not that appellees consider the issue minor or

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* *Simmons* v. *Federal Communications Commission*, 145 F. 2d 578 (D. C. Cir.); 169 F. 2d 670 (D. C. Cir.), *cert. denied*, 335 U. S. 846 (Appellees' Brief, p. 112, n. 128).

** *Thomas Paper Stock Co.* v. *Porter*, 328 U. S. 50, 53; *Yonkers* v. *United States*, 320 U. S. 685, 691-92; *United States* v. *Chicago, M., St. P. & P. R. R.*, 294 U. S. 499, 510-11; *United States* v. *Baltimore & Ohio R. R.*, 293 U. S. 454, 463-65; *Panama Refining Co.* v. *Ryan*, 293 U. S. 388, 431-33.

easy. They find it necessary to devote over ten pages of their brief (pp. 101-111) to arguments that the Commission could properly exercise power in this area. Their recognition of the importance of the question comes too late; it was the Commission's duty to lay bare, at the time it issued the Reports, what it considered to be the sources of the authority it exercised in ruling out competition.

Arguments of Counsel Against Competition.

Although arguments of counsel cannot be a substitute for administrative findings, appellees have put forth various arguments as to why the competition of compatible color was prohibited. They contend that the establishment of a single standard is consistent with the Commission's statutory duty to foster competition (Appellees' Brief, pp. 108-11).

As stated, the entire premise of this point is erroneous since the Commission did not adopt a single standard for television. It adopted multiple standards—a broad standard gauge for black and white and a narrow gauge for color. The Commission itself adopted a policy of competition between systems in the television service.

In its Second Report the Commission recognized this explicitly by saying

> "if both types of receivers are offered to the public, it will be the *free forces of competition* which govern whether a customer will buy a color receiver or a black and white receiver" (R. 418).

In view of the Commission's action in adopting, by the very order under review, a policy of competition between systems, appellees' later statement that the type of competition intended by the Communications Act is not between "means of signal transmissions but rather the competition

between licensees'' (Appellees' Brief, p. 110) becomes meaningless.

If competition under the Act was intended only to be between licensees and not between standards, then the Commission had no right to adopt an incompatible system and was obligated to adopt a compatible system, which runs on the standard gauge track.

Appellees argue, although the Commission has not so found, that it must be concerned lest the public waste its money on inferior sets (Appellees' Brief, p. 111).

This argument assumes that the fundamental law of the American economy—competition—is inapplicable to the field of broadcasting. No basis whatsoever is cited for such a sharp break with fundamental concepts of law.

Moreover, the argument assumes that set manufacturers have nothing to risk in selling inferior products. Those who manufacture television sets are fully aware of the importance of consumer good-will. It is precisely here that the Commission's assumption has no relation to the facts of life. A television set is not a bottle full of a mysterious patent medicine with a fancy label which proclaims that it contains the elixir of life. It is rather a standard article of commerce the worth of which the consumer judges *before he purchases it.*

45,000,000 people have television service today. They have purchased 12,000,000 sets. That is the measure of their experience in this area. It cannot reasonably be assumed that the public would buy an inferior product if it is permitted to watch, side by side in showrooms, color sets operating on two different systems. The acid test of comparison in the arena of free public choice is sought by set manufacturers here. It is only the Commission's action and the resistance by appellee CBS to competition that prevents it.

Appellees further argue that the Commission was justified in refusing to allow the competition of compatible color lest "licensees . . . drain their resources in complex and inoperable equipment" necessary to transmit compatible color (Appellees' Brief, p. 106).

This is a novel concept as to the type of competition appropriate for the broadcasting industry. It is not competition—it is the very antithesis of competition. Appellees are advocating that the Commission rather than competition shall decide what broadcasters and listeners may buy.

This position is in strange contrast to that previously taken by the Commission and the Solicitor General in their brief in this Court in *Federal Communications Commission* v. *Sanders Brothers Radio Station*, 309 U. S. 470. In that brief the government contrasted the statutory scheme which the Congress has provided for the railroads, where

> "there has been a substitution of governmental regulation for competition as a means of protecting the public" (p. 23)

with that for the broadcasting industry where no such scheme of governmental regulation is provided in the Act. On the contrary the Commission there stated that the Communications Act contemplates that, in the field of broadcasting, the protection of the public

> "must be found in the effects of competition". (p. 25)

Appellees argue further in attempting to justify the Commission's refusal to allow competition from compatible color that the RCA system has "excessive susceptibility" to interference from oscillator radiation and that, because of such interference, adoption of the RCA system "would more certainly require" a rearrangement

of channel allocations. (Appellees' Brief, pp. 106-07) This argument not only lacks support but is contrary to the facts. As Chairman Coy noted on the record (Tr. 6264):

> "In connection with this problem of oscillator radiation, it is not peculiar to color television systems or color television receivers. It is a problem we likewise have with us in black and white today. . ."

Other engineering testimony bears out the fact that the problem is common to both color and monochrome (Tr. 10692).

Counsel for the Commission in oral argument before the District Court termed such susceptibility a relatively minor matter (Tr. of Proc. 226). And CBS testified that such interference was of "secondary importance" (Tr. 9175). Appellees, in a search for some argumentative justification for prohibiting the RCA system in competition with the CBS system have suddenly decided, without any justification, that such interference was "excessive".

The argument that "a major method of minimizing such interference would be to rearrange the channels which can be assigned to the communities" is in flat contradiction to the engineering testimony in the record and to the positions taken by the Commission's engineer Chapin, and by Chairman Coy.

There is overwhelming testimony that the solution of the problem of interference due to oscillator radiation is a straightforward engineering matter of receiver design* (Tr. 10692-94, 10715-16).

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* RCA is on record with the Commission, through a letter of its President, that the problem should be dealt with as a matter of receiver design. RCA has already taken substantial steps to achieve this (Tr. 10715-16).

Chapin himself testified,

> "I prefer the approach [to solving oscillator radiation] by receiver design as the first thing to try to get around this difficulty . . ." (Tr. 10655).

When a witness suggested the possibility that one way to eliminate such interference would be to alter the channel allocations, Chairman Coy rejected that suggestion and concluded that it was a matter of receiver design (Tr. 8260-61).

Arguments of Counsel Are No Substitute For Findings.

The contentions advanced by appellees in their brief in support of the Commission's action prohibiting compatible color from competing with incompatible color are mere arguments of counsel. They are no substitute for the administrative findings which this Court requires.

The Commission made no finding, nor could a finding be sustained, that it had power to prohibit competition from a compatible color system which operates on the standard gauge and which can be received in black and white on all existing television receivers.

The Commission made no finding, nor could a finding be supported by the record, that the public and the broadcaster require protection from competition between compatible and incompatible color.

The Commission made no finding, nor could a finding be supported by the record, that allowing the RCA system to compete on the standard gauge would affect the allocation of channels.

Lack of proper administrative findings is an issue not new to this Court. It should also not have been new to this Commission. A far reaching regulation vitally affecting the public and an important industry has been imposed with-

out avowed reason. A middle ground in color television has not been considered. The public and the industry deserve better at the hands of a body charged with responsibility in an area of such significance.

POINT IV.

Reply to Argument that Substantial Evidence Is Not Necessary.

Appellees have always been reluctant to measure the findings and order of the Commission against objective and ascertainable facts. But they have never before argued that they do not need to satisfy the test of a review of the record for substantial supporting evidence. In this Court for the first time they suggest a standard of review which would uphold the order even if there is no substantial evidence in its favor. They say the order can only be overturned if "it bears no reasonable relation—in fact or as a policy matter—to the statutory duty of the Commission . . . and the statutory objective;" it is invalid, they say, only if it is not an alternative which "a rational person could have chosen" (Appellees' Brief, pp. 40-41).

But it is not and never has been the law that administrative actions of whatever kind are valid unless palpably irrational. Such a theory would make judicial review a mere formality. The pre-Administrative Procedure Act cases which appellees cite do not support any such extreme position—the case of *National Broadcasting Company* v. *United States*, for example, expressly held that the findings must be supported by evidence (319 U. S. 190, 224).

Since those cases, moreover, the Administrative Procedure Act has been passed, and the Commission must operate within its limits. 60 Stat. 237, 5 U. S. C. §1001 *et seq.*

That Act was designed, as this Court has recently said, to assure a *wider* scope of judicial review than had been afforded by the previous practice. *Universal Camera Corp.* v. *National Labor Relations Board*, ... U. S. ....., 71 Sup. Ct. 456; *National Labor Relations Board* v. *The Pittsburgh Steamship Co.*, ... U. S. ....., 71 Sup. Ct. 453.

Appellees argue, however, that even the Administrative Procedure Act does not make the requirement that the record must contain substantial supporting evidence applicable to this proceeding. This extraordinary argument misconstrues the language of the statute in a manner that would defeat the Congressional intent.

Appellees of course are insistent that review be on the record; indeed, they would confine all attention to the transcript of testimony before the Commission, and exhibits introduced while testimony was being taken. Everything else, they argue, must be ignored. They are not even willing to consider data submitted, after the testimonial hearing had been closed, in response to an express Commission request for data.

Appellees take the position, as they must to be consistent with this argument, that neither §10(e)(5) nor §10(e)(6) of the Administrative Procedure Act is applicable to this proceeding. Section 10(e)(6) they dismiss casually on the ground that it applies only when there is a trial *de novo*, which they of course consider out of the question here. Section 10(e)(5) they consider inapplicable on the ground that the hearing, whose record they rely on before this Court, was not required by statute.

But if anything is clear from the legislative history of this portion of the Administrative Procedure Act, it is that Congress intended all judicially reviewable administrative action to be subject to the requirements of either §10(e)(5)

or §10(e)(6). Between them, these two categories were intended to cover the entire field. The pertinent provisions of §10(e) are:

> "... the reviewing court shall ... hold unlawful and set aside agency action, findings, and conclusions found to be ...
>
> "(5) unsupported by substantial evidence in any case subject to the requirements of sections 1006 and 1007 of this title or otherwise reviewed on the record of an agency hearing provided by statute; or
>
> "(6) unwarranted by the facts to the extent that the facts are subject to trial *de novo* by the reviewing court."

The Senate Judiciary Committee explained that

> " ... the sixth category ... would permit trial *de novo* to establish the relevant facts as to the applicability of *any* rule ... where there is no statutory administrative hearing." *Legislative History of the Administrative Procedure Act*, SEN. DOC. No. 248, 79th Cong., 2d Sess., pp. 39-40.

The draft thus commented on was prior to the addition of the latter part of §10(e)(5). This latter addition was intended to make it clear that the two clauses together covered all situations. After this change, the House Judiciary Committee reported as to these two clauses:

> "In short, where a rule or order is not required by statute to be made after opportunity for agency hearing and to be reviewed solely upon the record thereof, the facts pertinent to any relevant question of law must be tried and determined *de novo* by the reviewing court respecting either the validity or application of such rule or order—because facts

> necessary to the determination of any relevant question of law must be determined of record somewhere and, if Congress has not provided that an agency shall do so, then the record must be made in court." (*Id.* at pp. 279-80)

The language of §10(e)(5) was therefore intended to cover all situations not requiring a trial *de novo*. It does in fact cover such situations, although the somewhat complex scheme of the statute does not make this immediately apparent. To understand the scope of subsection 5 it must first be realized that the requirements of §§7 and 8 apply to all hearings *required* by statute. This is made clear by §§4 and 5 which expressly so state. Thus if this simple substitution without change of meaning is made in the language, subsection 5 renders the substantial evidence rule applicable

> ". . . in any case [in which an agency hearing is *required* by statute] or otherwise reviewed on the record of an agency hearing *provided* by statute."

This substitution makes it plain that the phrase "provided by statute" covers something more than the phrase "required by statute."

In *Wong Yang Sung* v. *McGrath*, 339 U. S. 33, this Court held that the phrase "required by statute" covered all hearings held by compulsion, and omitted "only those hearings which administrative agencies may hold by regulation, rule, custom, or special dispensation" (p. 50). The latter are the hearings which are specifically intended to be covered by the phrase "provided by statute." The difference in language can lead only to a difference in result.

It must be reemphasized that to carry out the Congressional intent, if the substantial evidence rule is not ap-

plicable in the present case, then the order of the Commission must be reviewed under §10(e)(6) of the Administrative Procedure Act, and there must be a trial *de novo* in the District Court to determine whether the order is or is not "unwarranted by the facts". In either case, the decision here appealed from cannot be sustained.

The point is that a review must be either "on the record" or not on the record; either the parties are permitted to prove error by introducing new evidence before the court, or they are not. If they are not, if the review is "on the record," the record is insufficient if it does not contain substantial evidence in support of findings and order.

Appellees cannot have it both ways.

POINT V.

Reply to Argument that the Commission's Record Is Adequate and Its Action Supported by Substantial Evidence.

Admitted Inadequacy of Administrative Record.

Appellees endeavor by sheer number of references to the transcript of the hearings before the Commission to obscure the fact that the Commission's record is admittedly inadequate. No attempt is made by appellees to differentiate between outmoded and superseded evidence on the one hand and current evidence on the other, in spite of the statement of the majority of the District Court:

> "It is pertinently pointed out . . . that a number of critical findings [of the Commission] are based upon evidence which was taken in the earlier stage of the proceeding *which is not representative of the situation as it existed at the time the findings were adopted*" (R. 871).

Appellees do not have a satisfactory answer to the fact that in its First Report of September 1, 1950 the Commission itself held that the record before it considered in its entirety did not warrant final action. The Commission then conceded, as set forth in appellants' main brief (pp. 54-58), that the adoption of the CBS system without hearing further evidence would mean that the Commission was

> "compelled to *speculate* as to *an important basis for its decision . . .*"

and that

> "the Commission's determination on *an important part of its decision* would be based on *speculation and hope . . .*" (R. 165),

Clearly, "*an important basis* for its decision" and "*an important part* of its decision" mean just that, and not an insignificant or inconsequential part. Furthermore, "*speculation and hope*" mean speculation and hope and not substantial evidence.

The ultimate rationale of the Commission's decision is set forth by appellees in their brief. It is there stated (p. 24):

> "The Commission stated . . . that despite the advantages of postponing adoption of standards for the CBS color system in order to await the outcome of further developments or testing . . ., there was an important counter-balancing disadvantage. This disadvantage arose from the fact of the incompatibility of the CBS system."

In other words, appellees concede that the reason for the adoption of the CBS system at this time is a major and all pervading defect of that system.

Lack of Substantial Evidence to Support the Commission's Findings.

The extremes to which appellees find it necessary to go in endeavoring to meet appellants' attack on the substantiality of the Commission's findings (Appellants' Brief, pp. 52-97) are highlighted by their statement that appellants have not set out the Commission's findings in full but "have paraphrased them" (Appellees' Brief, p. 53).

This comes with poor grace from appellees since the so-called "basic findings" with respect to the CBS system and the RCA system were prepared by appellee CBS and were set forth in the CBS Memorandum filed with the court below. The court below in its opinion relied upon CBS at least to the extent of listing these basic findings (R. 868-70) which appellees, including CBS, now criticize.

Appellees do not and could not refute the validity of the evidence which appellants refer to in their brief as showing the lack of support for the Commission's findings (Appellants' Brief, pp. 52-97). They endeavor to minimize its weight and importance by stating that such evidence merely shows that there would have been support for the Commission to have reached a contrary conclusion. Such evidence, however, goes further than that. A review of the record as a whole shows that that evidence is the evidence which is current and of controlling importance.

In the first part of their brief, appellees have set forth a summary of the Commission's findings in its First Report and have attempted to show that these findings are supported by substantial evidence.

There is no question but what the appellees' citations are substantial *in number*. Appellants submit however that analysis of them shows that on the basis of review of the record as a whole there is not substantial evidence supporting the Commission's findings.

1. The CBS Color System.

a. Convertibility.

The Commission's finding that existing black and white receivers can be converted to receive CBS transmissions in color is in flat conflict with the evidence showing that CBS disc converters, upon which this finding is based, are hopelessly impractical.

The record shows that the only converters demonstrated by CBS require that the image size be *reduced* to that produced by a 7-inch tube in order for the converter to operate (Tr. 3246-47, 3448, 3597, 3617, 6549, 8989, 8999-9000, 9135).

Thus, in order to convert their receivers with disc apparatus, owners of 10-inch, 12-inch and 16-inch and larger receivers would have to be willing to accept a much smaller picture than they got when they bought their receivers.

There is no evidence in the record other than unsupported hope to show that these converters would meet with any degree of public acceptance. (See Tr. 9023)

There is the additional problem of mounting, which is made most acute by the requirement that the color disc must be at least twice as large as the diameter of the image to be covered and the fact that the receivers in the hands of the public are of an almost infinite variety of cabinet designs (R. 150, 602; Tr. 3217).

Throughout the hearing, CBS endeavored to give the impression that the Commission should consider conversion only in connection with table models of small picture size and of simple cabinet design. Efforts to bring out the fact that serious mounting problems are encountered on console and consolette receivers have drawn a charge from CBS of irrelevancy. However, there are many large tube receivers in the hands of the public—in fact, from the figures in the record, the inference is required that by far the great

majority of receivers in the hands of the public have tubes which are of such a size as to require image reduction in order to permit conversion with disc apparatus. In addition, only about 60% of the receivers produced during the period from the end of the war through February, 1950 were table model receivers (Exhibit 385).

The response of a CBS witness to questioning as to how conversion of the various models of television receivers shown in Exhibit 400 could be converted is significant in considering how much weight can be given to a finding of "convertibility" based on mechanical disc-type converters.

This testimony was that the proper way to mount a CBS converter on any console or consolette receiver was to mount the converter on a pedestal similar to a microphone stand and put the microphone pedestal, with the converter on top, in front of the receiver. Although the witness gave consideration to the possibility of using "a set of straps over the top of the set" he concluded that the microphone pedestal would be more feasible and "We would handle practically all of these [console and consolette receivers] that way" (Tr. 9154-55).

Although the witness at first did not think it would ever be necessary to move this pedestal-mounted converter, later he conceded that it would be desirable to attach wheels to the microphone pedestal so that standard black and white pictures could be viewed and the full usefulness of the original set preserved (Tr. 9155-56).

The cost of these spinning mechanical converters is another serious deterrent to conversion. The weighted average of the cost of disc-type conversion contained in the estimates submitted by members of the Radio-Television Manufacturers' Association was $250 (Exhibit 204). In addition some of the member companies stated that they considered disc-type conversion so impractical that cost esti-

mates were not submitted. These companies included Admiral, Magnavox and Stromberg-Carlson. Although Philco, DuMont and RCA submitted cost estimates of disc-type conversion, they expressly stated that they did not consider such conversion to be practical. (Exhibit 204; Tr. 2666-67, 2671, 4864, 9962).

The estimates of cost of disc-type conversion by the witnesses who testified on behalf of CBS were lower, ranging between $55 and $80 for the cost of a 7-inch (magnified to 10-inch) disc converter (Tr. 3592, 3687). To this would have to be added the cost of scanning adaptation, which, according to the estimates given by the witnesses called on behalf of CBS, would range from $20 to $50 (Tr. 3515, 3687, 3635-38). Thus the cost of converting, using even the lowest estimates, would range from $75 to $130.

In April, Mr. Gross, the President of Teletone, testified on behalf of CBS that his 10 inch monochrome set was selling then for about $130 (Tr. 9099).

It is clear that, *based on the testimony of CBS' own witnesses, the cost of conversion is in the neighborhood of 100% of the cost of a new black and white set.*

The Notice of the Commission upon which the color hearings were based specified that any color system would be considered for adoption only if its transmissions could be received "simply by making relatively minor modifications in such existing receivers" (R. 26). To characterize a change which requires the expenditure of an amount equal to the purchase price of a new set as "relatively minor", as the Commission did in its Second Report (R. 417), transgresses the bounds of reason.

b. Adaptability: Quality of Black and White Picture From Color.

Throughout their brief appellees have tried to establish that adaptation of existing receivers to receive CBS color

in black and white was inexpensive and easy. Even if it were possible to adapt the 12,000,000 receivers in the hands of the public to receive CBS color (as degraded black and white pictures), doing so would be neither inexpensive nor easy (R. 147-48, 575, 602, 794, 876; Tr. 4830, 5538-41, 6858, 8187).

In order that existing receivers may receive CBS color in black and white, the principal change required is that the scanning circuits of the receiver be changed from a scanning speed of 15,750 lines per second to a scanning speed of 29,160 lines per second (Tr. 3971). This requires an important change in the essential operating elements of the receiver.

What this means in terms of practicalities of actual change-over is illustrated by the DuMont experience before the war. Prior to World War II, there were about 1,000 DuMont television receivers in the hands of the public. When the Commission authorized a change in the channel allocations, DuMont found it necessary to bring the receivers which it had sold back to the factory in order to make the required changes in the tuning range of the radio frequency selector circuits. Again, when the scanning standards were changed from 441 lines 60 fields to 525 lines 60 fields—a net increase of only 2,520 lines per second as against a net increase of 13,410 lines per second under the Commission's order—DuMont found it necessary to bring its receivers back to the factory for the necessary conversion. As stated by Dr. Goldsmith:

> "The reason we adopted the policy of bringing those sets back to the factory for conversion rather than sending a service man to convert them in the customer's home was that we found that initial tests of that sort had very sad results" (Tr. 5277).

It was on the basis of DuMont's experience, and not on the basis of *a priori* reasoning of the kind forthcoming from CBS witnesses, that Dr. Goldsmith of the DuMont company testified that the changes required in existing receivers to enable them to receive CBS color in black and white are

> ". . . far beyond the practical realm of what a service man can do in a living room" (Tr. 5106).

The heavy burden of cost which would be imposed upon the public by external adaptation, as proposed by CBS, is shown by CBS' own witnesses. These estimates for external adapters range from $32 to $50 (Tr. 3513-14, 3687). No allowance was made for the service charge of installation except the plainly ridiculous estimate of $2.00 to $2.50 made by one witness (Tr. 3637).

Even disregarding the service charge factor, the cost of adapting the more than 12 million receivers now in the hands of the public on the basis of these CBS figures would be on the order of $384,000,000 to $600,000,000.*

Nor is this the only price the public would have to pay merely to continue to receive their present black and white

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* Furthermore, there is no sound basis for assuming that the cost of adaptation would be this low. The Philco and DuMont estimates of $75-$125 were dismissed by the Commission and not even taken into account (R. 148). The DuMont and Philco testimony regarding this matter shows that the reason their estimates were higher than others was their desire to protect their good will and avoid, so far as possible, degrading the performance of their sets now in the hands of the public.

Nor does the FCC Laboratory Division's report with respect to adaptation (Exhibit 390) warrant the inference that the cost to the public of adaptation to receive CBS color in black and white will be low. No provision in those estimates was made for labor costs, costs of installation, or allowance for overhead and profit (Tr. 10652). Furthermore, the labor cost involved in using engineers of the same ability and background to adapt receivers generally precludes any comparison between what was done there and what could be expected from an ordinary serviceman.

service, if the order is allowed to stand. They would also have to accept a 60 per cent reduction in picture detail.*

This 60 per cent degradation of receiver performance is inherent in the quality of the transmissions provided for by the Commission's order. No matter how good the adaptation may be, this degradation is inevitable. Performance may be even further degraded, however, if the adaptation is not skillfully performed.

The required adaptation of existing receivers was found by the Commission to be a "relatively minor modification". Such a finding cannot be said to be rational in the light of the facts given.

c. Equipment Considerations.

The Commission's findings with respect to CBS receivers and the citations to the transcript made by appellees relate to CBS mechanical spinning disc receivers. The uncontradicted evidence is that the mechanical disc receivers are inherently limited in picture size, brightness and are susceptible to flicker and color break-up. Even CBS concedes that the elimination of these undesirable characteristics can only be achieved with all-electronic receivers (see Tr. 3110, 3169, 3217, 3237-8, 9196-98, 9572).

What the Commission has done therefore is to adopt an incompatible low-definition system because of some imaginary advantages in that system's use of mechanical receivers which even CBS concedes have reached maximum performance and picture size.

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* What appellees term "firm support in the record" for the Commission's conclusion that this degraded black and white picture will be acceptable, is based upon certain public reaction tests conducted by CBS. It was during these same surveys that CBS, while demonstrating its color, showed the public participants in the survey black and white pictures from CBS color transmissions *without telling the public that they were being shown a degraded black and white picture* (Tr. 6363, 6368). This was continued until *CBS counsel himself had the practice stopped* (Tr. 6368).

This in the face of a record which discloses that disc receivers will not be satisfactory for use in the home under normal television broadcasting conditions (see cross-examination of Stanton, Tr. 8659-71; see also Tr. 9349-54).

Appellees endeavor to support the action of the Commission in standardizing on a system of color television in which, on the basis of the mechanical disc receivers proposed and demonstrated, the direct-view picture size would be limited to 12½ inches. Appellees state that "a public reaction survey showed an overwhelming preference for 12½ inch color pictures to 16 inch black and white pictures" (p. 87). Similar support for the Commission's action was claimed at other points in appellees' brief (pp. 29, 83).

The impropriety of appellees' reliance on the survey is shown by the report of the survey itself. With reference to the question upon the answers to which appellees rely, the "Instructions for Interviewers", as set forth in the report, stated (Exhibit 332):

> "The essence of this question is the comparison of the critical feature of color *rather than size of the picture.*"

The Commission's findings with respect to the cost of CBS disc-type receivers are virtually meaningless since they relate to receivers of tube size for which there is no public demand today. For example, the Commission's findings relate to a 7 inch receiver. Even at the time of the hearing, a 10 inch receiver was the smallest for which there was any substantial market (see Exhibits 386, 450). The minimum for which there is now any substantial market is a 16 inch receiver (R. 602).

The only cost estimate for a CBS disc-type receiver of a size which may find public acceptance today was the DuMont estimate of $500 to $600 for a 12½ inch receiver (Tr. 9391-92).

The importance of this is shown by Dr. DuMont's testimony that the cost of color receivers for the RCA and CBS systems was approximately equal, with the possible edge in favor of RCA (Tr. 9391-92).

Mr. Smith of Philco testified that he had "a very strong conviction that the cheapest way . . . to build a color receiver is to use a direct view type of color tube" and an all-electronic color system like the RCA system (Tr. 8201).

The finding that the camera used with the CBS system can be used out-of-doors rests upon one short demonstration in October, 1949; appellees, in their brief (p. 22), have stated that CBS station equipment is simple to handle and has been subjected to use in *"widely diversified circumstances"* without difficulty.

Dr. DuMont, on the contrary, testified:

> ". . . I actually have not been able to sell myself that it could handle normal commercial programs." (Tr. 9393)
>
> • • • • • •
>
> ". . . you cannot make a determination from just one demonstration of 10, 15 minutes, I don't believe; and I have purposely looked at the demonstrations whenever I could in New York, and it is the same Patty Painter with the fans, since 1946; I keep seeing the same thing" (Tr. 9545).

d. Flicker and Brightness.

The Commission's findings with respect to flicker and brightness in the RCA and in the CBS systems respectively are characteristic of the Commission's approach to the RCA system.

The finding for CBS is that the maximum brightness of 22 foot lamberts achieved by CBS disc receivers is

> "entirely adequate for use in the home under normal viewing conditions" (R. 136).

The finding for RCA is that the brightness of RCA color receivers was not sufficient for ordinary home use (R. 137). This finding was made a month *after* the Commission had been informed that the RCA tri-color tube receivers had achieved brightness of more than 20 foot lamberts and the Commission had been invited to see this for itself (R. 400).

No reference is made by appellees to the testimony of Mr. Fink, Dr. Goldsmith, and Dr. DuMont in connection with the finding that CBS receiver brightness can be increased by use of tubes with long persistence phosphors. This testimony shows that the tendency of long persistence phosphors to "smear" imposes severe limitations upon the use of such phosphors and may make their use for commercial home receivers for the CBS system impossible (Tr. 7989-90, 9499, 9942-45).

Appellees contend that the public reaction surveys submitted by CBS show that the CBS mechanical disc receivers were adequately bright, or perhaps even a little too bright, although the highlight brightness of its receivers did not exceed 25 footlamberts (Appellees' Brief, pp. 75-76; Tr. 6738-39).

As was brought out in the examination of the CBS employee who testified regarding these surveys and in the testimony of a member of the Commission's staff, the question regarding brightness put by CBS to those members of the public who participated could easily have been misunderstood. One who found the colors too vivid might well have answered that the picture was too bright, even though he did not find that the screen illumination was excessive or even adequate (Tr. 6746-48, 6829-30).

The record shows that a more valid response would have been obtained by allowing a choice of pictures of different highlight brightness (Tr. 6849). This was the procedure followed in the experiments conducted by the technical com-

mittee of which the present Chief Engineer of the Commission was a member.

On the basis of a side-by-side comparison, those experiments resulted in a choice of brightness between 30 footlamberts and 1400 footlamberts, with preferred values near the maximum (Docket 7896, pp. 418-19, 431-32; Exhibit 21, pp. 127-146).

These findings in respect of brightness by a committee of experts which included Mr. Plummer, now Chief Engineer of the Commission, are so sharply at variance with the Commission's conclusion in respect of "adequate" brightness for the public as to show in still another respect the unreasonableness of the Commission's order.

e. Registration—Color Break-Up and Fringing.

Color fringing and break-up are inherent in the CBS disc type apparatus (Exhibit 210). CBS claims and the Commission found that use of disc type mechanical apparatus minimized registration problems. But what the Commission's findings failed to point out is something admitted by CBS—that the use of disc type apparatus results in trading registration problems for color fringing and color break-up.

As stated by Dr. Goldmark of CBS:

> "... But we concede that you can see color fringing on the pattern." (Tr. 9596)

Appellees rely extensively, to support the findings which the Commission made, upon surveys conducted by CBS. In one such survey 33 people replied:

> "Color break-up [was] annoying, particularly when viewer moves eyes, rainbow effect, flashes of color." (Exhibit 332, p. 31)

The significance of this is indicated by the fact that in the same survey and in answer to the same question calling for general comments, only 8 commented favorably on the quality of CBS color (Exhibit 332).

2. The RCA Color System.

a. Flicker.

Dr. DuMont is cited by appellees in support of the finding by the Commission that the flicker characteristics of the RCA system are doubtful (Appellees' Brief, p. 8).

Dr. DuMont testified:

> "I don't think there is any problem on flicker [in the RCA system] whatever." (Tr. 9379)

b. Brightness.

Reference is made to the finding that

> "there is doubt . . . whether there is not a fundamental limitation . . . on its [the RCA] brightness potential." (Appellees' Brief, p. 9)

Although there is citation of the testimony of Dr. DuMont which he gave before the RCA tri-color tube receivers were demonstrated, no reference is made to his testimony after that demonstration that there are no inherent limitations in the brightness obtainable with the RCA tri-color tube (Tr. 9936-37).

Nor is any reference made by appellees to the testimony of Dr. Engstrom of RCA that in the month following the first demonstration of the tri-color tube, the brightness of one of the two types of tubes was increased by 100 per cent and the brightness of the other by 50 per cent (Tr. 10872-73).

Nor is there any reference by appellees to other testimony that the brightness which was demonstrated prior to

the close of the testimony on May 26, 1950 was not the ultimate RCA brightness performance. The testimony was that the picture brightness of the RCA tri-color tube has improved and will continue to improve (Tr. 7842, 7987, 8121, 9548, 10399, 10872-73).*

Nor is there any reference by appellees to the fact reported to the Commission on July 31, 1950, more than a month before this finding was made, that the brightness of its receivers had already increased by almost 300 per cent over the brightness demonstrated on April 6, 1950 (R. 137, 400).

c. Compatibility: Quality of Black and White Pictures From Color.

The testimony of Adrian Murphy, Vice President of CBS, is cited to support the proposition that black and white pictures received without alteration on existing black and white receivers from RCA color broadcasts is somewhat inferior to present black and white pictures (Appellees' Brief, pp. 11-12). However, Mr. Murphy gave unwitting but nevertheless eloquent evidence to the contrary on the record.

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* Appellees state there is "doubt" as to whether the duty cycle of the RCA color television system places a fundamental limitation on brightness potential (Appellees' Brief, p. 9). The hearing references it gives are all to Dr. Goldmark. This testimony appellees, and the Commission, stack against the diametrically opposite views of all the other experts who testified at the hearing concerning this matter. Since appellees' reference is apparently to the brightness obtainable with the RCA system using the tri-color tube it may be noted that Dr. Goldmark's expertise in this field may be judged in part in light of the fact that although he testified in March, 1941 that he had developed a tube which produced a color picture within the tube without moving parts (Docket 5806, p. 2607), he nevertheless testified before the Commission in March, 1950 that he had not been able to make such a tube (Tr. 6539-40).

At one point during the color television demonstrations in November, 1949, Murphy stated on the record his opinion that the standard black and white receiver which was being shown was operating on standard black and white signals (Tr. 5933). Actually, however, as was pointed out at the time, Murphy was mistaken. That receiver was reproducing black and white pictures from RCA color transmissions. Mr. Murphy was unable to detect the difference (Tr. 5933).

The testimony of Mr. Fink is also of interest:

> ". . . what I have seen in the black and white version of the RCA color pictures convinces me that a dot interlace black-and-white picture is satisfactory, does not represent a degradation of service ..." (Tr. 8083).

This is fully supported by other evidence (Tr. 6051-53, 6056-60, 6096-97, 7465-70, 10462-64).

The excellent quality of the black and white pictures received from RCA color transmissions is further attested by the broadcasts of RCA color over WNBW in Washington, D. C. More than 800 hours of broadcasts of the RCA color system were made under circumstances closely approximating commercial operating conditions (Exhibit 427). The favorable response of the public to these broadcasts attests to their high quality (Exhibits 364, 365, 366, 367).

Written responses commenting on these broadcasts included such as the following (Exhibit 367):

> (1) "Your color tests came through beautifully on my black and white set. All outlines are very clearly defined."
>
> (2) "I have viewed your telecasts on my Black and White Motorola, early model, and the picture has been clear and sharp. The fact that you were broad-

casting the color pictures did not affect the reception on my Motorola in the least."

(3) "Your Channel 4 color program is received *better* than any other channel. Color programs come in *better* than the regular programs." (Emphasis in original).

(4) "Reception was equally as good and possibly better than standard telecasts."

(5) "The show was viewed in black and white and was equally as clear and distinct as your conventional telecasts which are tops."

(6) "The picture is coming through very sharp and clear. Much better than other programs in black and white."

(7) "We seem to get the color program much clearer and neater than the regular programs."

d. Color Fidelity.

In appellants' main brief it is shown that on the basis of the record as a whole the only proper conclusion which can be reached is that the color fidelity of the RCA color television system is of high quality (Appellants' Brief, pp. 69-74).

Appellees, however, are persistent in their reliance on outmoded and superseded evidence. In their brief they state that "At all of its demonstrations on the record, RCA had difficulty producing a picture with adequate color fidelity" (Appellees' Brief, pp. 9-10). In support of this statement appellees cite, in addition to a paragraph of the Commission's First Report, a total of 22 transcript references. More than half of these references were to testimony given in the fall of 1949. This was before RCA had made certain improvements in the performance of its system, improvements which led to such comments as that by

one Commissioner with reference to the showing of RCA color at the February 23, 1950 demonstration (Tr. 6900):

> "... we have seen that [the RCA system] and it produced beautiful color."

Of the 22 citations, moreover, 16 were to CBS witnesses, 1 to Chapin and 1 to an interested CTI witness. The remaining 4 citations were to testimony of Dr. DuMont and Dr. Goldsmith of the DuMont Laboratories. Of those references, 3 were to testimony given in 1949. The other, and only remaining citation, was to testimony of Dr. Goldsmith. On the same page of the transcript cited by appellees, it shows that Dr. Goldsmith stated (Tr. 9926):

> "Theoretically the RCA type system . . . can probably give the highest color fidelity of any of the systems."

Again, at page 53 of their brief, appellees state that "In respect of RCA color fidelity as demonstrated, the record is replete with testimony commenting adversely thereon." In support, they list 26 citations, which are substantially the same as those previously enumerated. More than half of these references are also to outmoded 1949 testimony.

Of the 26 references, 17 are to CBS witnesses, 2 to Chapin and 1 to an interested CTI witness. The remaining 6 citations are to Dr. DuMont and Dr. Goldsmith. Of these, 5 are to testimony given in 1949. The other reference is to the page of Dr. Goldsmith's testimony in 1950 which, as shown above, also sets forth his testimony as to the potential superiority of the RCA system with respect to color fidelity (Tr. 9926).

In the discussion of RCA color fidelity in their brief, appellees attempt to make much of certain testimony by Dr.

Goldmark with reference to the performance of an RCA color receiver in late April, 1950 (Appellees' Brief, p. 54). Appellees fail to point out that the receiver referred to was of the dichroic mirror type which had been superseded by the RCA tri-color tube receivers.

e. Registration.

Colonel Lippincott is cited by appellees to support the proposition that misregistration was apparent at all RCA demonstrations on the record (Appellees' Brief, p. 9). Colonel Lippincott's testimony regarding the demonstration on the record of the RCA tri-color tube receivers on April 6, 1950 was

> "I did not see that demonstration" (Tr. 11485)

The particular importance of the tri-color tube demonstration which Colonel Lippincott did not see is indicated by the testimony of Mr. John Christensen, chief engineer of the Engineering Research Division of CBS, that

> "I would expect the RCA tube to eliminate the problem of registration at the receiver . . . " (Tr. 11679)

Similarly, reference is made by appellees to the testimony of Dr. Goldsmith of DuMont Laboratories, and Dr. DuMont himself, to support the finding that "registration is a severe problem . . . at the camera . . ." (Appellees' Brief, p. 9).

The exact testimony of these witnesses is of interest.

Dr. DuMont stated that there was some problem in registry at the camera end but that

> ". . . *there are ways and means to overcome that.* It is just a question of time." (Tr. 9380)

Dr. Goldsmith stated that

> "We believe there are developments in the mill which can overcome that particular [camera] registration problem . . ." (Tr. 9921)

Dr. Goldsmith further stated

> *"The registration I don't believe is a fundamental limitation of the RCA system . . .* Even at the camera end. I think they have done a wonderful job of keeping three tubes under control . . . *the registration problem is just an equipment limitation at the present time, it is not a fundamental limitation. It can be overcome completely."* (Tr. 9954-55)

When asked by Commission counsel whether Dr. Goldsmith had "complete confidence" in the fact that camera registration as a problem for RCA could be overcome completely, Dr. Goldsmith's answer was, "Yes." (Tr. 9955)

The testimony of Mr. Fink and of Dr. Baker of General Electric is also of interest.

Mr. Fink stated that registration "is a problem which is defined very definitely in electrical, optical and mechanical terms and, therefore, is presumably a matter of engineering; can be approached as and on a strictly engineering basis, to improve it in the same way as we have improved everything else in television." (Tr. 2076-77)

Dr. Baker testified:

> "I feel confident that it [registration at the camera] can be licked." (Tr. 9629)

f. Resolution.

To contradict the finding by the Condon Committee that the RCA system has the same resolution or picture

detail as the standard black and white system, appellees have referred among other things, to the testimony of Mr. Plummer, Chief Engineer of the Commission (Appellees' Brief, p. 10).

The uncontradicted testimony of Mr. Plummer with respect to a test reading of resolution on the record was that it was a fair inference that the RCA system can achieve a horizontal resolution as great as that which could be achieved by the standard black and white system using the same test pattern (Tr. 6703-05).

g. Picture Texture.

With respect to RCA picture texture, appellees make the surprising statement with reference to that part of the basic finding stating that "it is difficult to see how these defects can be eliminated" that "appellants have not attacked [this finding] in this Court" (Appellees' Brief, p. 60). On the contrary, appellants in their main brief showed not only that the texture of the RCA picture was satisfactory but that any possible deficiencies in that respect had been overcome (Appellants' Brief, pp. 74-75). Thus, as was stated in the RCA Progress Report of July 31, 1950 (R. 400):

> "The elimination of dot structure and moire pattern is due to the use of improved circuits in the receivers which make better use of by-passed 'mixed highs' ".

Clearly a finding that "it is difficult to see how these defects can be eliminated" is "attacked" and rebutted when it is shown that any possible deficiencies have been eliminated.

h. Convertibility.

The convertibility of the RCA system is discussed at pages 12 and 13 of this Reply Brief. As there shown, the

RCA system is a convertible system, and appellees' claim that it is not is wholly unwarranted.*

i. Equipment Considerations.

To support the Commission's finding that at none of the demonstrations was a "practical" RCA home receiver shown, extensive reference is made to testimony regarding the early model RCA color receivers which were superseded entirely by the RCA tri-color tube receivers (Appellees' Brief, pp. 12-13, 61-64). What conceivable relevance this superseded testimony can have is not clear.

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* Appellees try to base the Commission's refusal to look at or consider improvements and new developments in the RCA system to a large extent upon the wholly erroneous assertion that RCA in 1946 and 1947 supported a simultaneous system of color television which "never survived field testing" and "proved to be a failure even before it emerged from the laboratory" (Appellees' Brief, pp. 92, 129, 139). The fact is that the simultaneous system has "survived", has "emerged from the laboratory", and, as modified to enable it to operate in 6-megacycle channels, is the RCA color television system today. The Commission was fully advised of this by RCA at the outset of the hearings (Tr. 2655-60, 2812; Exhibit 206). Thus, it was stated that the RCA color television system

> ". . . has its roots in the simultaneous method first disclosed by Radio Corporation of America on October 30, 1946 and subsequently described in detail at the Hearing in Docket No. 7896.
>
> "The new system, as in the case of the wide-band simultaneous system, is completely compatible with the current black and white television system.
>
> "In addition, the new system includes later developments which, in essence, compress the simultaneous system into a 4-megacycle band suitable for a total channel assignment of 6 megacycles. Not only is the system so compressed, but no detail is lost in the process. This in turn insures a high-definition color picture, while at the same time preserving the normal definition of the black-and-white picture.
>
> "The compression of the simultaneous system is accomplished by a combination of two processes:
>
> "(a) use of the mixed-highs principle; and
>
> "(b) color-picture sampling and time-multiplex transmission." (Exhibit 209)

Again, as stated by the District Court,

> ". . . a number of critical findings are based upon evidence which was taken in the early stage of the proceeding which is not representative of the situation as it existed at the time the findings were adopted" (R. 871).

Appellees also assert that the RCA receiving apparatus is complex and costly (Appellees' Brief, pp. 13, 62). As appellants show in their main brief, both assertions are clearly unsupportable on the basis of the whole record (Appellants' Brief, pp. 75-79).

With respect to the question of complexity, even Chapin admitted, on cross-examination, that there is not "much significant difference" between RCA and CBS (Tr. 10632).*

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*In their brief appellees assert that RCA color receivers are expected to be more complex than CBS receivers "because a time error of only 1/11,000,000 of a second adversely affects color fidelity" (Appellees' Brief, p. 13). This assertion is both inaccurate and misleading (R. 297-298). As RCA in its Comments of September 28, 1950 advised the Commission (R. 298):

> "The ordinary black and white television receiver provides an accuracy in its synchronization process which is of the same order. If the synchronized horizontal scanning wave in such a receiver were to be shifted in time by 1/7,000,000 of a second in successive frames, details of the picture would be mislocated by approximately the width of a normal picture element, thereby losing half the picture resolution. Since most receivers suffer no appreciable loss of resolution, even in the presence of a noisy signal, the accuracy provided is far better than 1/11,000,000 second.
>
> "For black and white television receivers the required accuracy is obtained through the use of automatic frequency control circuits. These same circuits can be effective in maintaining the needed accuracy for color television. The receiver circuit functioning is synchronized by the 'burst' precisely at the start of each scanning line. Consequently the color control circuits are 'on their own' for only 1/15,750 second, or the time of one scanning line.
>
> "Tolerances of this order are encountered in many types of electronic equipment, such as radar and shoran *upon the operation of which the safety and lives of men depend.*"

Dr. DuMont testified (Tr. 9391):

> "I think it [CBS equipment] is probably a little more complex than . . . RCA."

Mr. Smith of Philco stated (Tr. 8275):

> ". . . it [the RCA system] will give you the most practical form of color television I have seen yet."

With respect to receiver costs, the unchallenged estimate of the cost of an RCA tri-color tube receiver is that it will be between 25 and 50 per cent more than a black and white receiver of the same size (Tr. 7864-65, 10082). RCA's Chairman of the Board, Brigadier General Sarnoff, testified (Tr. 10044):

> "RCA color receivers can be manufactured and sold for prices that will be competitive with any other color receiver that has been demonstrated or proposed."

Both Mr. Smith of Philco and Dr. DuMont testified that RCA receiver costs would probably be less than those of CBS (Tr. 8201, 9392).

Similarly, appellees' effort to establish support for the assertions as to the complexity and cost of RCA studio equipment ignores the fact that the reliability in day-to-day operation of the RCA studio equipment is established not only by testimony but also by actual operating experience over Station WNBW in Washington—operating experience which closely approximates day-to-day commercial operating conditions and which were on the air regularly from January, 1950 down to the date of the Commission's order (Tr. 6051, 6107-08, 7227; Exhibits 427, 429, 430).

The Record as a Whole Does Not Support the Criteria Chosen by the Commission.

In appellants' main brief it was pointed out that the adoption of the CBS system was premised upon certain criteria which the Commission had formulated for the first time *after* the hearings had ended (R. 155-56), that it was apparent from the omissions from these criteria that the ones selected were tailored to fit the CBS system and to make possible its adoption, and that there was no support in the record for the omission of other and more important criteria which would have precluded the adoption of the CBS system (p. 84).

Appellees now contend that the Commission's selection of criteria does not have to be supported by the record and that the only question involved is as to the *a priori* reasonableness of the Commission's choice of criteria (Appellees' Brief, p. 85). It would seem clear that neither on the basis of the record nor on the basis of reason could the Commission have selected the criteria it did. Furthermore, the selection of criteria may be so decisive of the administrative result that such criteria should not be adopted without substantial support in the record. Otherwise the Commission can so tailor its criteria, as it did in this case, that it can reach a result completely contrary to the almost unanimous testimony of the experts appearing before it.

The answer to the question whether one would prefer to own a horse and buggy or an automobile today seems obvious. But if the factors of speed, endurance and comfort are excluded, some might feel that the answer would be entirely different.

POINT VI.

Reply to Argument That the Court Below Afforded Appellants Proper Judicial Review.

In their main brief appellants contend that the court below should have reviewed "the record as a whole" in order to determine with respect to the decision of the Commission whether "the evidence supporting that decision is substantial, when viewed in the light that the record in its entirety furnishes." *Universal Camera Corporation* v. *National Labor Relations Board*, ... U. S. ....., 71 S. Ct. 456; *National Labor Relations Board* v. *The Pittsburgh Steamship Company*, ... U. S. ....., 71 S. Ct. 453.

Appellees do not expressly claim that the court below afforded appellants such judicial review.* Indeed, appellees could not properly do so since the court below avoided the performance of this duty by stating (R. 871):

> "While the findings of the Commission are severely criticized, it is not contended in the main that they are not supported by substantial evidence."

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* Appellees refer to a statement by one of the judges of the court below made in the course of the oral argument to the effect that they were going to give the case their "best thought" (Appellees' brief, p. 118). This is apparently cited as evidence of an intention by that member of the court thereafter to consider the issues carefully. If its opinion, however, the majority of the court conceded that its consideration of the case was not the careful study which the case merited. The majority opinion states that

> "in studying the case, we have been unable to free our minds of the question as to why we should devote the time and energy which the importance of the case merits . . ." (R. 866)

Appellees attempt to read into the *Universal Camera* case an indication that the Seventh Circuit "had previously been applying the 'record as a whole' test" is unwarranted (Appellees' Brief, p. 123). As is pointed out in appellants' main brief (p. 135), the case shows to the contrary.

Of necessity, therefore, appellees are reduced to an unsupported assertion that there is no contention by appellants that the order and findings of the Commission are not supported by substantial evidence. As is shown in appellants' main brief, appellants vigorously contended before the lower court, as they now contend, that there is no substantial support for the order and findings of the Commission (pp. 58-97, 136-137).

In the appellants' main brief it is shown that in many other important respects the court below did not afford proper judicial review. Decisive and controlling questions in the case were left entirely unresolved by the District Court (Appellants' Brief, pp. 138-139).

Appellees do not and could not claim that these matters were decided by the court below.* Nor do appellees explain the statement by the court below that (R. 866):

> ". . . we have been unable to free our minds of the question as to why we should devote the time and energy which the importance of the case merits, realizing as we must that the controversy can only be finally terminated by a decision of the Supreme Court. This is so because any decision we make is appealable to that court as a matter of right and we were informed during oral argument, in no uncertain terms, that which otherwise might be expected, that is, that the aggrieved party or parties will immediately appeal. In other words, this is little more than a practice session where the parties

* There is no proper basis for appellees' speculation that even if the court below had afforded appellants full and proper judicial review, and had followed the proper standard in such review, the result would have been the same (Appellees' Brief, p. 123). Indeed, if the court below, contrary to the holding of this Court in the *Universal Camera Corporation* case, had not proceeded on the erroneous premise that its "scope of review" was "so firmly delineated", the decision of the court would have been quite different.

prepare and test their ammunition for the big battle ahead."

Appellees do not explain the court's statement, it is submitted, for the reason that it is apparent that the District Court intended to leave consideration of the merits of appellants' case to this Court. Indeed, as the District Court further stated (R. 875):

> "Thus, as we evaluate the situation, there are *two* courses open, (1) to allow defendants' motion for a summary judgment, and (2) to vacate the order and send the proceeding back to the Commission for further consideration in view of recent developments in the color television field as well as the rapidly changing economic situation. A pursuance of the latter course, assuming we have such authority, of which there may be doubt, would inevitably result in the prolongation of the controversy which badly needs the finality of decision which can be made only by the Supreme Court. In other words, the interests of all, so we think, will be better served with this controversy on its way up rather than back from whence it comes."

The plain failure of the District Court to afford proper judicial review in this case leads appellees to attempt to transform this Court into a court of first instance. Indeed, this is what appellees are ultimately reduced to in their endeavor to salvage the order of the District Court (Appellees' Brief, p. 122).

In these circumstances, it is submitted, the judgment of the court below should be reversed. *Lutcher & Moore Lumber Co.* v. *Knight*, 217 U. S. 257; *Ex parte Harley-Davidson Motor Co.*, 259 U. S. 414; *Oklahoma Natural Gas Co.* v. *Russell*, 261 U. S. 290; *Federal Communications Commission* v. *WJR, The Goodwill Station, Inc.* 337 U. S. 265.

Conclusion.

For these reasons it is submitted that the decision of the District Court dismissing appellants' complaint should be reversed and the cause remanded to that court for the issuance of a permanent injunction against the order.

Respectfully submitted,

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